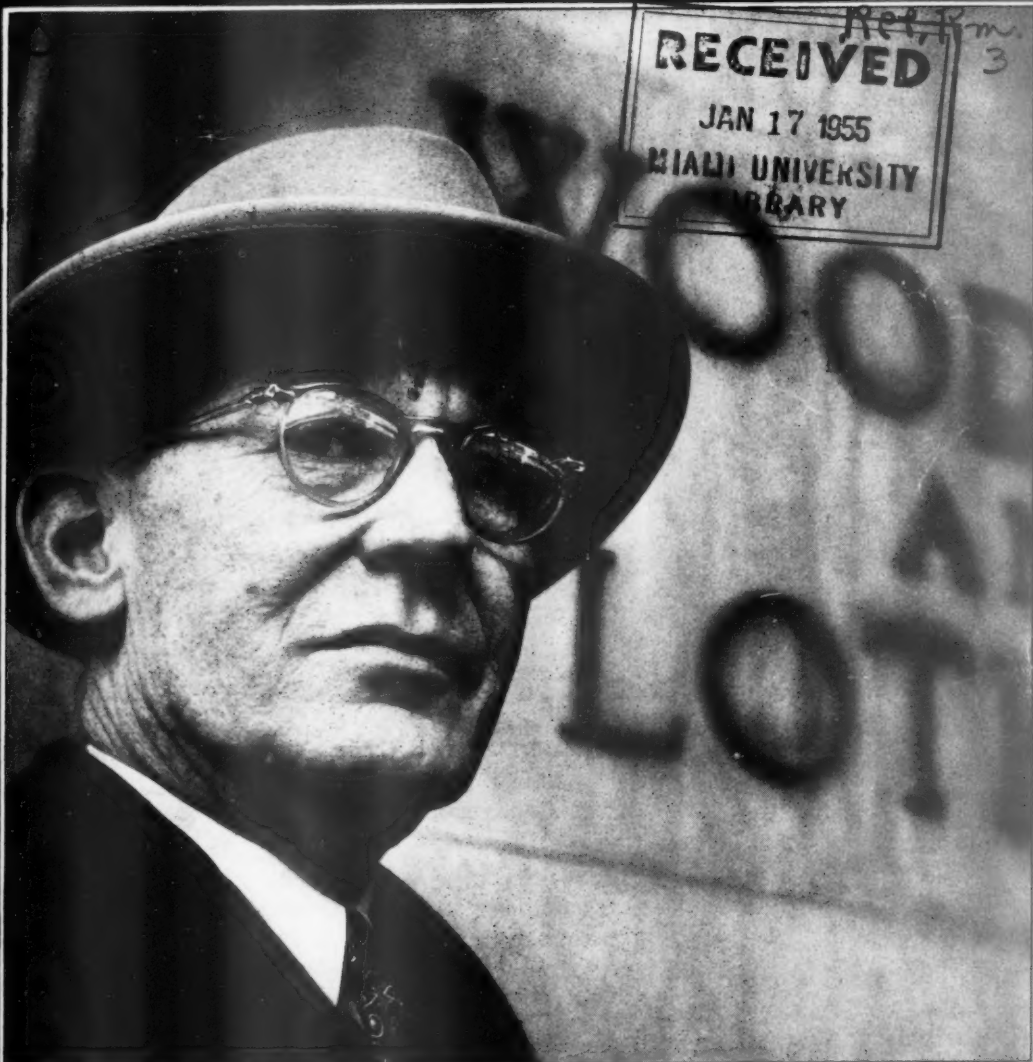


BUSINESS WEEK

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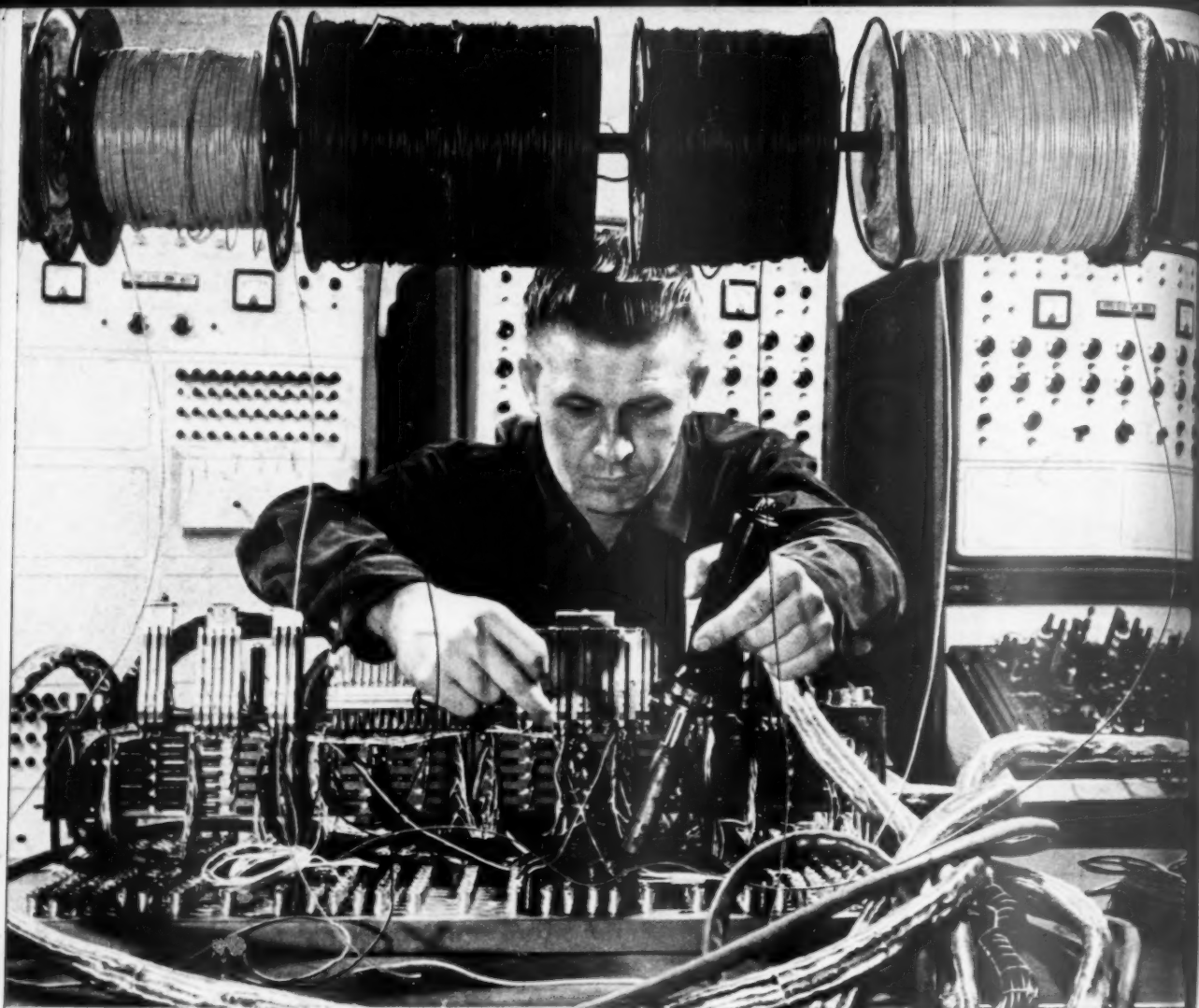


NRDGA's Philip M. Talbott: Coexistence for downtown (page 42)

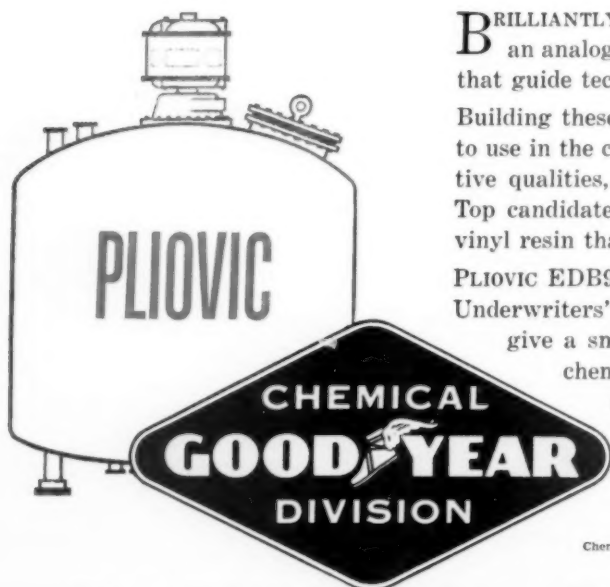
A MCGRAW-HILL PUBLICATION

JAN. 15, 1955

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How to keep an electronic mind thinking straight



BRILLIANTLY jacketed wires are the answer to the problem of keeping an analog computer thinking straight. They serve as safe signposts that guide technicians quickly through the maze of circuits.

Building these signposts, however, is another problem. What material to use in the covering is the question. It must have near perfect insulative qualities, plus the ability to be easily and permanently colored. Top candidate for the job is PLIOVIC EDB90V — an electrical grade vinyl resin that's unusually easy to process.

PLIOVIC EDB90V is carefully made to meet the rigid requirements of Underwriters' Laboratories. It also compounds and extrudes readily to give a smooth, tough, flexible covering that resists oils, greases, chemicals and age. It's one of the PLIOVIC family of vinyl resins designed to give better products at lower costs. For details, write to: Goodyear, Chemical Division, Department A-9415, Akron 16, Ohio.

Chemigum, Pliobond, Pliolite, Plio-Tuf, Pliovic — T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

The Finest Chemicals for Industry

CHEMIGUM • PLIOBOND • PLIOLITE • PLIO-TUF • PLIOVIC • WING-CHEMICALS



Mrs. Donald Cummings, Jr., and her young son Donald

"I WASN'T ALONE ANY MORE"

Most of us know what it is like to have a telephone. But have you ever thought what it would be like if it wasn't there, even for a little while?

Here are some good words along that line from Mrs. Donald Cummings, Jr.

"When we moved into our new house," she told us a few weeks ago, "I felt a little strange—with a young baby and all—and I couldn't seem to get a feeling of being settled and at home.

"Then the telephone was put in. And suddenly everything seemed different. I could call people! I felt better about being by myself in the house with the baby. I felt better about my mother who had been ill in Boston. And about my husband in uniform far away.

"And then I realized that it wasn't just the telephone calls I could make—it was that people could call me if necessary. I wasn't alone any more."

BELL TELEPHONE SYSTEM

Reminding you that someone, somewhere, would like to hear your voice today.



NEW ATOMIC CANNON



keeps its
own
score
on



this
Veeder-Root
Counter

(U.S. ARMY PHOTO)

Added Evidence
that—

Everyone Can Count on
VEEDER-ROOT

This mobile 280 mm. atomic cannon has two recoil motions. The primary recoil absorbs the cannon's "kick". The secondary recoil (something new in artillery) absorbs the forces created by the primary recoil. And each recoil motion is recorded by this special Veeder-Root Counter designed with a plunger-action shaft . . . which keeps the score on the cannon's use and indicates

approaching need for maintenance.

This again points up the fact that "Anything Worth Making — or Worth Doing — Is Worth Counting." And Veeder-Root has the experience and resources you can count on, to give you any counter you need . . . for any mechanical or electrical application . . . in any field from Atomics to Automation. Write:

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONNECTICUT



Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

"The Name that Counts"

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Eve

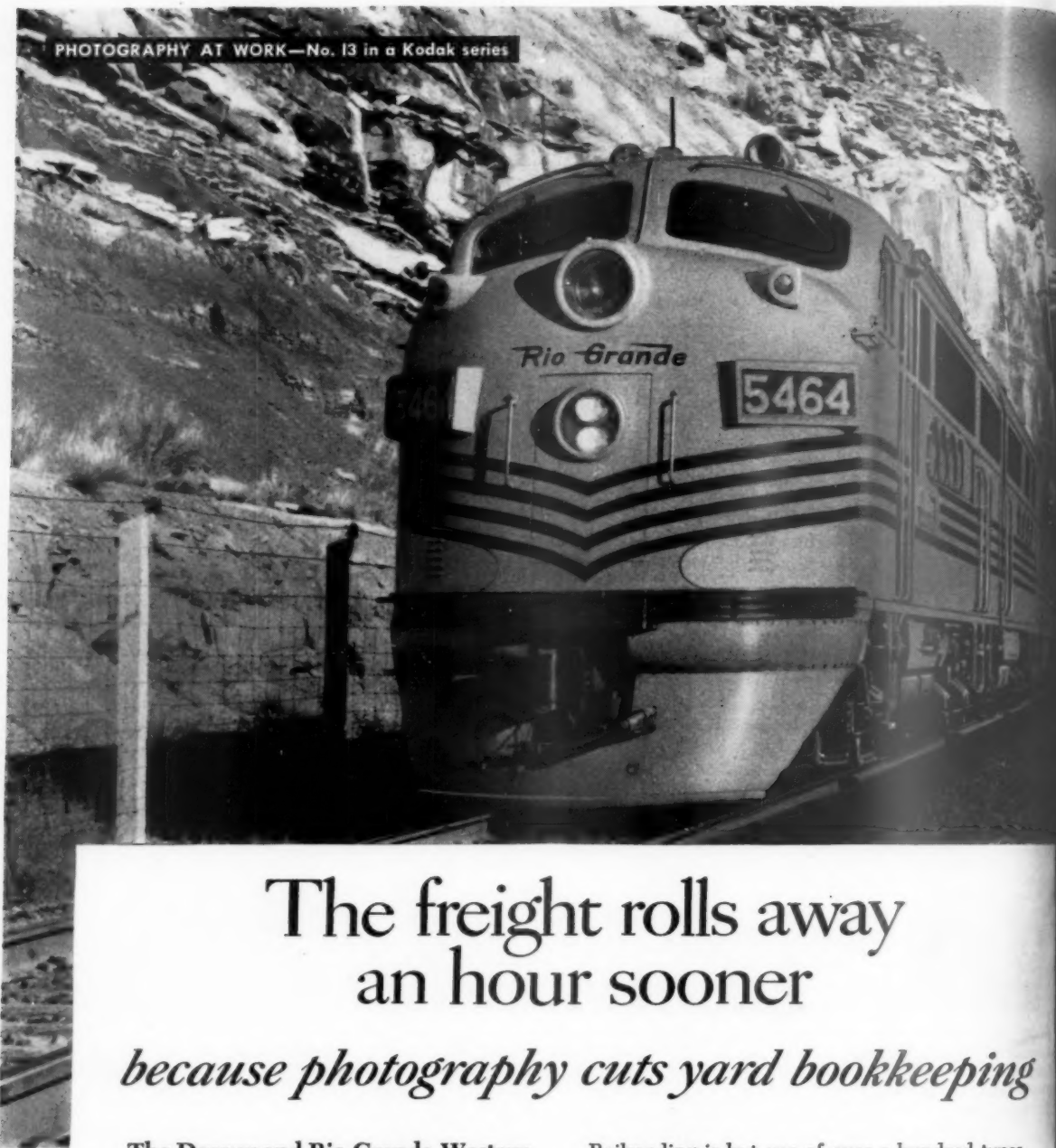
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BUSINE

PHOTOGRAPHY AT WORK—No. 13 in a Kodak series



The freight rolls away an hour sooner

because photography cuts yard bookkeeping

**The Denver and Rio Grande Western
Railroad microfilms its waybills in
minutes, cuts running schedules, saves
costs in train idling time.**

You don't find a Rio Grande freight idling at the terminal while waybills are copied by hand. Instead, Recordak Microfilming copies them. Then they're put aboard and the train is off in just about one-fifth the time it used to take, thus saving hours of valuable crew and train time. Then the wheel reports are made up from the films and teletyped ahead.

Railroading is but one of over a hundred types of businesses now saving money, time and space with microfilming. It is one of the fast growing and widely used ways photography works for industry.

Small businesses and large are finding that photography helps in simplifying routine procedures, in product design, in personnel relations. It improves production, saves time and cuts costs. It can work for you too. How? Some hints appear in the panel shown here. It gives just some of the ways photography can prove a profitable partner in your business.

Eastman Kodak Company, Rochester 4, N. Y.



Westbound Rio Grande freight in Ruby Canyon of Colorado River.

... and here are 16 basic places where Photography can work for you

—5 minutes with this check list can be the soundest business move you've made this year

- ☐ **Management**—Progress Photos, Stockholder reports, Record preservation, Information distribution, Control and Organization charts
- ☐ **Administration**—File debulking, Purchase schedule, Office layout, Interior decoration, Form printing
- ☐ **Public Relations**—News release, Institutional, Community relations, Public service
- ☐ **Personnel**—Identification photos, Job description, Orientation, Payroll records, Employee personal records, House organs, Health records, Bulletins
- ☐ **Training and Safety**—Safety campaigns, Teaching, Reports, Fire prevention
- ☐ **Engineering**—Drawings, Specification sheets, Drawing protection, Pilot radiography
- ☐ **Research**—Reports, Flow studies, Process charts, Library, Photomicrography, electron-micrography, x-ray diffraction, etc.
- ☐ **Product Design & Development**—Styling, Consumer testing, Motion studies, Stress analysis, Performance studies
- ☐ **Advertising**—Advertisements, Booklets, Displays, Dealer promotion, Television
- ☐ **Plant Engineering & Maintenance**—Plant layout, Repair proposals, Piping & Wiring installations, Progressive maintenance, Record debulking
- ☐ **Production**—Time study, Work methods, Legible drawings, Schedules, Process records
- ☐ **Testing & Quality Control**—Test set-ups, Reports, Standards library, Radiography, Instrument recording
- ☐ **Warehousing & Distribution**—Inventory control, Damage records, Waybill duplicates, Flow layouts, Packing & loading records
- ☐ **Purchasing**—Schedules, Duplicate engineering prints, Specifications, Component selection, Source information
- ☐ **Sales**—Portfolios, Dealer helps, Sales talks, Price & delivery information
- ☐ **Service**—Manuals, Parts lists, Installation photos, Training helps, Records.

These books show how photography is being used today.

Photography in Marketing
Photography in Administration
Photography in Engineering
Photography in Plant Operation

They are free. Write for the ones you want.



Kodak
TRADE-MARK

ROSS

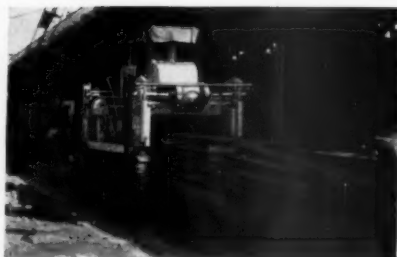


The most efficient horizontal



PINEAPPLE

During peak season at Dole Hawaiian Pineapple Company, two of these giant Carriers work as a team. They straddle the same highway trailer and remove two 8-ton bins simultaneously in one minute flat.



CONSTRUCTION

Fehlhaber Corp., New York City, covers a radius of $1\frac{1}{2}$ miles between job-site and storage yard with this Carrier. It saves them \$2.50 per ton of steel delivered to elevated-highway job.



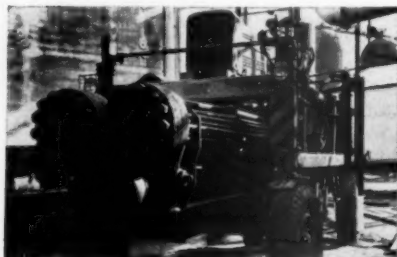
RAILROAD

At the Milwaukee Road's Main Shops and General Stores Div., Carriers relieve switch engines and cars from the costly job of moving structural steel, poles, drums, etc., through the terminal.



AUTO FRAMES

A. O. Smith Corp. maintains a constant flow of sub-assemblies to their automotive frame assembly line with Carriers. A single man is able to transport 480 tons of material each 8-hour day.



HEAT EXCHANGERS

At a major Southwest refinery, this Carrier teams up with a boom truck to disassemble heat exchangers. The Carrier transports bundles, valves, pipe, etc. on wooden bolsters.



STEEL TUBE

The Gary plant of U.S. Steel's National Tube Div. employs this Carrier to transport billets to and from outdoor storage, and to handle a steady flow of tubing from one manufacturing stage to another.

CARRIER

...the one-truck fleet!

... loads itself in 5 seconds

... travels at speeds up to 56 mph

... unloads itself in 3 seconds

... capacities up to 50,000 lbs.

In the time it takes a full crew to load a comparable-capacity delivery truck, a Ross Carrier can frequently *complete* the delivery. Carrier operation is absolutely unique: there's no waiting time for loading or unloading. In 5 seconds the Carrier loads itself and takes off at road speed. You can schedule your deliveries or transportation in advance, then make up all the loads for Carrier pick-up. When the Carrier reaches its destination, it drops the load in 3 seconds and hustles back for the next. *Practically perpetual motion for this one-truck fleet!*

Revolutionary as it sounds, the Carrier has proved itself conclusively in scores of industries, some of which are pictured here. In many of these applications, a single Carrier has replaced two or even three conventional trucks. In all applications, no other kind of materials handling equipment could do the job so economically! This phenomenal success should compel you to ask yourself: *How much money can I save by changing or supplementing my present system with the Ross Carrier?* Every cost-conscious company should know the answer.

handling method yet devised!



BUILDING SUPPLIES

Rather than go to the expense of installing a spur track to service an across-the-street warehouse, Carter-Lee Lumber Co., Indianapolis, bought this Carrier; they also use it for street delivery.



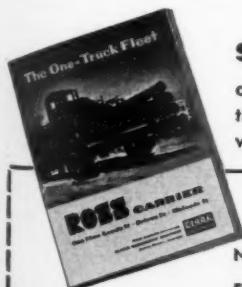
SCRAP IRON

Central Iron & Metal Co., Battle Creek, replaced six trucks with two of these Carriers. They handle 30,000 lb. scrap loads in "gondolas" which are left at customers' yards.



COTTON BALES

Four Ross Carriers deliver 15-bale loads to the docks at Corpus Christi from the warehouse of Gulf Compress Company. The Carriers make the 2½ mile round-trip in 15 minutes.



Send for free booklet...

containing illustrated case histories which show Ross Carrier-operations in food, steel, scrap iron, petroleum, transportation, metal-working and construction industries.

☐ **Send Carrier booklet**

Name _____
Firm _____
Address _____
City _____

ROSS CARRIER DIVISION
CLARK EQUIPMENT COMPANY
Benton Harbor 42, Michigan

CLARK
EQUIP



ROSS

The most efficient horizontal



PINEAPPLE

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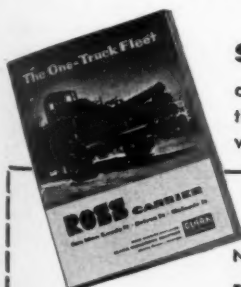
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☐ **Send Carrier booklet**

Name _____

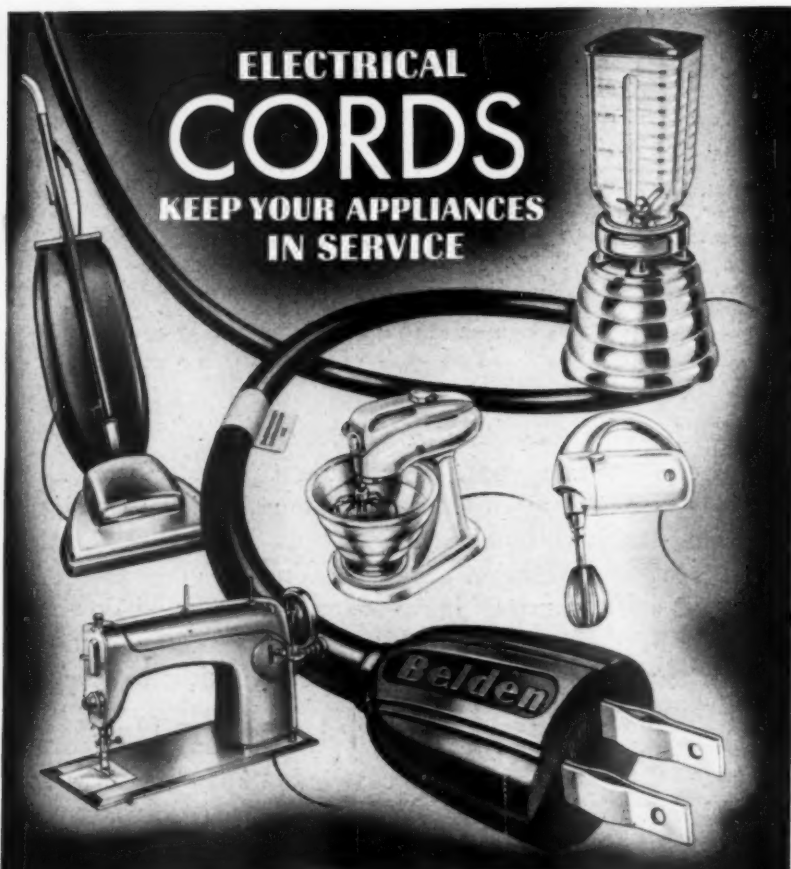
Firm _____

Address _____

City _____

ROSS CARRIER DIVISION
CLARK EQUIPMENT COMPANY
Benton Harbor 42, Michigan

**CLARK
EQUIPMENT**



ELECTRICAL CORDS

KEEP YOUR APPLIANCES
IN SERVICE

The purchase price represents only the starting point in figuring the over-all costs of electrical cords.

Add to that: receiving inspection costs—assembly costs—line inspection costs—and the costs of failures in service. The total is the real cost of cords.

If you think in terms of *actual* over-all profit—it will pay you to do business with Belden.

Save Time, Save Money

Specify Belden

Belden Manufacturing Co.
4689-A W. Van Buren St., Chicago 44, Ill.

MANUFACTURERS WHOSE PRODUCTS SERVE BEST...

Specify **Belden**
WIREMAKER FOR INDUSTRY

READERS REPORT

Historical Note

Dear Sir:

I believe you will find that the Schwab who bought the Grey process for Bethlehem Steel was Charles Michael, not Charles W., as you report in your Dec. 11 issue, page 62 [Steel: New Bet on an Old Winner]. . . .

D. T. DENMAN

WINDSOR INTERNATIONAL
CO., INC.

RIVERSIDE, CONN.

Setting an Example

Dear Sir:

Your article, Economically the Negro Gains But He's Still the Low Man [BW—Dec.18'54,p76], was read by our company with extreme interest.

Three years ago, we seriously weighed the advantages of having a Negro salesman represent our product and, in effect, our company. Today, we owe much of the success of the distribution of our product, "Goop" hand cleaner, to Lester B. Bradley, a Negro.

For the past year he has traveled eight Midwestern states selling "Goop" to service stations, garages, retailers and industrial concerns. He has been well received in the sales field, and we believe that he is probably one of the very few Negroes successfully selling to the white trade.

Congratulations on a well-written article and a fine publication. Best wishes for the New Year.

JOHN E. CRITZAS

SALES MANAGER

THE MUENCH LABORATORIES, INC.
ST. LOUIS, MO.

. . . In Corporation Sano

Dear Sir:

We read with interest your article, What Makes Business Call in the Doctors [BW—Dec.11'54,p66]. It reviews many important facets of the client-consultant relationship.

During over 34 years of practice, we have seen several swings in emphasis throughout the consulting field; our conclusions are that any management problem will yield to professional attack, and that there is an element of faddism in the shifting emphasis.

The reasons for engaging a con-

INSTALLATION COMPLETE - PROFITS COMING with...



...ENGINEERED *"Automatic" Sprinkler* PROTECTION

Department store executives have that special awareness of what's needed for maximum fire safety and they invariably select ENGINEERED "Automatic" Sprinkler PROTECTION.

Like most businessmen, they know that "Automatic" Sprinklers can save them money whether they ever have a fire or not ... can save their business if they do.

Get FREE descriptive literature and complete Investment Analysis information.

Write "Automatic" Sprinkler
Corporation of America
Dept. A—Box 360
Youngstown 1, Ohio



Offices in Principal Cities of North and South America

There's a *new idea* for you in this picture



This is new FLOW RACK! It's an amazingly versatile materials handling device. Manufacturers find it a production aid . . . wholesalers find it excellent for systematic order picking.

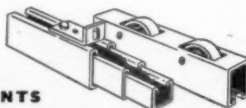
This picture shows it used for small-parts storage . . . making all items easy to select from fewer aisles. It provides constant, visual inventory control.

Costing as little as \$2.25 per hatch-foot, including rack, track and guard rail, Rapistan FLOW RACK is the first unitized, gravity flow shelving available . . . and Rapistan is turning it out by the mile on a modern mass production basis, cutting its cost to little more than "dead" storage.

It saves space, places parts in process right next to production lines, eliminates traffic jams. Whether your live-storage problems involve FIFO (first-in-first-out), inventory control, or just plain ease of handling, you should check conveyORIZED FLOW RACK advantages.

Let us send you-

A FREE SAMPLE OF
FLOW RACK COMPONENTS



Rapistan
FLOW RACK

Talk it over with your production men, and determine how you can use FLOW RACK. Just send your name to the address below.

The RAPIDS-STANDARD CO., Inc.
405 Rapistan Bldg., Grand Rapids 2, Mich.

sultant are not only specific to the economic climate, but often have to do as well with factors in the client's organization which have been recognized over a period of many years.

In contrast to your statement that "few companies are asking for surveys to find justification for a new plant or plant expansion," we have had a surprising number of requests for this sort of undertaking. We feel that perhaps just plain, old plant equipment and operations are no longer as intriguing as other fields, and therefore it is often assumed that they are doing fine, while attention is given elsewhere. The inevitable reawakening means reassessment of the physical plant, whereupon it frequently turns out that modernization of both equipment and operating technics is a fundamental need.

DAVID REMER

PRESIDENT

WALLACE CLARK & CO.

MANAGEMENT CONSULTANTS

NEW YORK, N. Y.

Dear Sir:

Your candid approach to the question, What Makes Business Call in the Doctors . . . prompts me to offer a brief footnote. As first aid in stopping the flow of red ink to the balance sheet, a simple study of the principal systems of management may be helpful. We have, I believe, three that are fundamentally and distinctly different, and which are currently recognized in this country—the military, the political, and the free enterprise systems.

The military system is based upon absolute power, makes its own laws and may use extreme measures in enforcing them. The political system is similar to the military, but is more loosely organized and depends upon limited and involved means for enforcing its directives. This is the traditional European system, and in this country it becomes anemic and requires constant "medical" care.

It will be found that, in general, successful concerns operate more or less consistently under the free enterprise system, and are thus definitely organized to constantly produce the right answer, the right method, and the right policy at every stage and for every phase of their operations. These concerns have no use for absolute power and they scorn directives. It can be said that the free enterprise system in its highest form can render a concern invulnerable to any at-

Don't take it out on the salesmen!



Item #23-B out of Plant 2 is backing up in the field.

Anxious phone call. Hurried plane trip. "Get out there and *sell*, you so-and-so's!"

He might better have stayed at the main office. That's where the fault lay—in Central Accounting. Sales figures from Plant 2 (and all other plants) are processed there. It often takes weeks and weeks. Meantime, Plant 2 merrily continues full production of an item that's laying an egg with the customers.

What's needed? Up-to-the-minute fig-

ures on both production and sales — compiled right at the branch level. How to get them? With Keysort punched cards.

A McBee Keysort installation can provide comprehensive, accurate reports on every phase of branch operation. Fast, too — in your hands no later than the 4th of the following month. Whether you run a 100-man plant or a colossus employing thousands-plus. And the cost is remarkably low.

The trained McBee man near you can show you how it's done. Or write us.

McBEE KEYSORT®

Punched-card accounting for any business

Manufactured exclusively by The McBee Company, Athens, Ohio • Division of Royal McBee Corporation
Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario

THE PACKAGING NEWSFRONT

A leading coffee company has **licked an unusual packaging problem** and reduced packaging costs with **zippered Bemis Waterproof Bags**. This experience points the way for producers of various types of products which need **economical, reusable containers that provide special protection**.

This coffee company has a roasting and grinding plant in one city, and a grinding and packaging plant in another large city, about 150 miles distant. Roasted coffee beans are trucked from the first city to the second to be ground and packaged to provide freshly roasted coffee for the local trade.



The need was for an **economical, reusable container that would prevent contamination and also preserve the coffee flavor and aroma**.

Zippered Bemis Waterproof (laminated textile) Bags met all requirements after other types of containers failed to get through the experimental tests.

The company reports that the bags are good for at least sixty round trips, **bringing the container cost down to about 2½ cents per trip**.

A double saving has been effected by an Oregon manufacturer of sweaters, jackets, etc., through the use of economical multiwall paper bags for parcel post shipments of his garments.

The firm previously used an insulated type of bag but occasionally the package was punctured and the insulating material then damaged the garment.

A Bemis packaging specialist recommended a multiwall bag with a special laminating agent between plies as a moisture block. **This has eliminated the manufacturer's problem and saved him money.**

You can answer so many needs with Bemis products... both in and out of the packaging field. If you need a package that will **increase sales, give better protection to your product, or simply save you money**... or if you are interested in other Bemis developments in paper, textiles or plastics... consult us. Bemis products meet an astounding number of industrial, commercial and recreational requirements, and new uses are continually coming to light. You may want our engineers to **create a new package, or to advise you on packaging methods**. Please write us.

Bemis



408 D Pine Street
St. Louis 2, Mo.

tack and possibly to anything short of a national catastrophe.

ROBERT L. STEWART
INDUSTRIAL ECONOMIST
HUNTINGTON PARK, CALIF.

Risk Capital Wanted

Dear Sir:

Please refer to Business Outlook [BW—Dec.25'54,p9] [from which] I quote as follows:

"**JOBS WANTED:** 20-million of them over the next 20 years.

"It's up to American industry to supply these jobs. Otherwise, the economy will trail population growth, living standards will suffer.

"Creating the 20-million new jobs falls to the lot of top management—and this is problem enough. Personnel experts also will face tasks with ever-changing aspects, all of which call for advanced planning."

The primary objective of American industry is to provide goods and services at prices the public can afford... and, incidentally, jobs are created.

It takes a substantial amount of capital to provide a job, but this capital will be forthcoming from the people if there is an incentive to invest and that incentive is the possibility of a return. The greater the return, the greater is the risk that the investor will take, and we need **RISK CAPITAL** to provide jobs.

There will be jobs for the 20-million... if people can be induced to invest in productive enterprise. These 20-million will not only want jobs, they will be customers for products produced...

MALCOLM F. HILL

EVANSTON, ILL.

Air Freight's Future

Dear Sir:

As economists for Riddle Airlines, Inc., we read your... article, Air Freight: The Passenger Lines Are Winning Out [BW—Dec.11 '54,p56], with keen interest. The compact intelligence you put into your features makes them "must" reading even in fields in which we regard ourselves as specialists.

The "independent" carriers' decline in volume, which you cite, is not unexplainable. Of the three independents operating domestically, Riddle has actually grown markedly, having in the first nine months of this year carried over its system 14,111,817 pounds compared to 10,926,723 pounds in the corresponding period of 1953, a gain of 28.7%. By so doing, it has enjoyed a \$148,557 net operat-

To better serve your steel needs,

INLAND

has been building since 1893.



WHY INLAND WILL INVEST \$35,000,000 IN YOUR FUTURE IN 1955

Banking on the ability of Midwestern industry to create new and improved products in ever greater volume, to satisfy the demand of the American people for a higher standard of living, Inland keeps pace with new and improved plants, processes and facilities to better serve their customers with quality steel . . . when, where and how they want it.

INLAND STEEL COMPANY

38 South Dearborn Street • Chicago 3, Illinois
Sales Offices: Chicago • Milwaukee • St. Paul
Davenport • St. Louis • Kansas City • Indianapolis
Detroit • New York

Principal Products: Sheets • Strip • Structural
Shapes • Plates • Bars • Tin Mill Products • Rails
and Track Accessories • Coal Chemicals

INVINCIBLE MODERNETTES

*The modern auxiliary desk
units that offer new flexibility
in office planning*



Here's new, prestige-building beauty and new utility for executive and professional offices. Modernettes are carefully matched and modular-designed to help you solve space-planning problems to the inch. Advanced design and construction features assure lasting beauty and service. Write today for details on Invincible's complete line of steel office equipment.



INVINCIBLE

METAL FURNITURE COMPANY
MANITOWOC, WISCONSIN

In Canada: A. R. Davey Company Ltd., Factory Representative
175 Bedford Road, Toronto 5, Canada

Set the pace for better business living



88" wall cabinet

60" wall table

60" wall desk unit

ing profit over the first nine months of this year, and will probably approach the \$200,000 figure for the entire year. It would appear, therefore, that the independent operator can still carry freight profitably.

It is definitely true, however, that Slick and Flying Tigers have suffered severe losses of traffic. A significant share of the blame for this must be attributed to the off-and-on status of their merger, which consumed entirely too many months. Employees insecure in their jobs cannot reasonably be expected to hustle up business, and hustling is still highly necessary.

There is little doubt today that the all-cargo plane is indispensable to the growth of air cargo. No shipper can develop the air freight habit if he cannot be certain that his shipments won't be left behind. Use of the combination plane threatens him with off-loading in favor of higher paying passengers and, further, raises questions as to whether the cargo will fit through the combination plane door, or whether the odors will be offensive to the passengers. The only unresolved question today is simple: Who will fly the all-cargo planes? Accordingly, the certificate hearings now before the Civil Aeronautics Board are a fight for survival by the independents.

Air freight cannot, moreover, attain the volumes prophesied for it until rates drop appreciably, and that requires, as you have indicated, a new and better all-cargo plane—one that is presently still unavailable. . . .

In view of American Airlines' phenomenal showing in the air freight field, no one can seriously contend that a carrier cannot specialize in both passenger and freight, if he has the desire to do so. Heretofore, the all-cargo specialists have provided the combination carriers with a gnawing fear that they may be building up something even bigger than the passenger business, and that the combination carriers may be left out in the cold if they don't do something about it. There is no assurance that the demise of the specialists, the independents, will not induce the combination carriers to resume their time-honored practice of relegating freight to a by-product status, something to be carried only when space is left available by low passenger loads. . . .

S. S. COLKER

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ECONOMIC CONSULTANTS
WASHINGTON, D. C.



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OLKER



The poised and massive power of the Strategic Air Command has given it a unique role in the annals of military history, that of a dominant force for world peace. Superior aircraft like these B-47s in readiness at March Air Force Base, California, expertly trained maintenance and flight crews, advanced weapons and dedicated leaders, make it America's most potent defender.

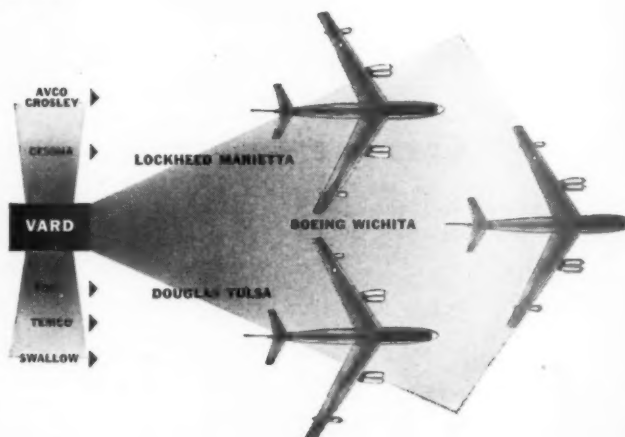
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VARD

BUSINESS OUTLOOK

BUSINESS WEEK
JAN. 15, 1955

A BUSINESS WEEK

SERVICE

Businessmen haven't much time for looking backward right now. Yet a glance is interesting, and it may even pay dividends.

Strong points of 1954 could also be strong points of 1955.

They should, in any event, be worth some appraisal by anyone who is interested in finding out how we got where we are.

Here, in the clear light of hindsight, are some 1954 blessings:

The boom abroad; easy money at home; record construction activity; biggest retail sales ever; reasonable price stability.

Setting the mood was business and consumer confidence.

Consumers spent freely. To start with, lower taxes helped offset a decline in personal income.

But, early in the year, this higher spending wasn't for goods.

It went on services, as has so often been pointed out. Higher cost of both housing and transportation soaked up much of the money.

Late in the year, however, retail sales caught and passed 1953.

Volume for stores of all kinds lagged 1953 by about 2% well into the autumn. November signaled a pickup, and December figures (preliminary) add up to a most emphatic vote of confidence in Santa Claus.

The Dept. of Commerce tots up retail volume at \$170.8-billion.

That's only a fraction of 1% ahead of 1953. And it took a gain of \$1.6-billion, or 9%, in December to put it over. But there it is.

Best gainers in 1954 were filling stations and stores handling food, groceries, and drugs. Eating and drinking places also gained.

General merchandise, department stores, furniture and appliances, and apparel retailers failed narrowly to overtake 1953.

The automotive and lumber-building supply-hardware groups fell behind pretty substantially (even though the building suppliers were ahead in December and autos came through with a smashing finish).

Construction was beset by a few qualms early in 1954, but it didn't wait nearly so long as retailing to establish new records.

As early as May, gains over 1953 were becoming pronounced; they widened progressively as the year wore along. Final volume is put at \$37.2-billion in the joint Labor-Commerce Dept. estimate.

Thus the year ran more than \$1-billion ahead even of the midyear forecast and virtually \$2-billion over 1953.

Construction's largest single segment—private residential outlays—put on the year's most robust comeback.

Here there were minus signs for late winter and early spring. But this turned in May (when the gain was 5%), and the margin widened from there on. December's gain of 28% was best.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
JAN. 15, 1955

Volume of residential work put in place now is figured at almost \$13½-billion, \$1½-billion or 13% ahead of the year before.

Best gains for public works (so often mentioned as a strong point) came early in the year—particularly for highways and sewers.

Highways, which were 25% ahead in the spring, wound up the year running little more than 5% higher. The year's average gain of 11% brought the outlay to \$3½-billion, up \$360-million.

Regional cement shortages pinched late-year volume, of course. But it also became increasingly difficult to top 1953's second-half bulge.

Industrial construction did better, relatively speaking, than had been expected. Sharp declines early were pared until December ran only 3% behind year-earlier levels. The year's volume topped \$2-billion.

Incidentally, public spending on industrial buildings (presumably mostly atomic) came to \$1½-billion despite a 15% cut.

Military building has been whacked, of course, but it still may be higher than a lot of people think. Such expenditures were \$1-billion in 1954 even though they tumbled 23% below the year before.

—•—

Booming residential construction (along with the big Christmas and something of a consumer catch-up) has been helping appliance sales and doubtless will continue to do so for some time.

Anyhow, this week found Westinghouse adding up the best fourth quarter on record as 1954 results came in. The company's November and December figures topped 1953 by 24%.

And Westinghouse expresses high optimism for its line this year.

—•—

Money management's role in taming the business cycle always commands attention—but its part never can be precisely measured. The only 1954 certainty, perhaps, is that the easy credit policy didn't hurt.

Now comes 1955—with the credit reins a little tighter. Interest rates are tending upward on many types of loans.

Will this be just right, too little, or too much?

—•—

Production in other parts of the non-Communist world apparently picked up what little slack there was in the United States last year.

This at least is indicated by the monthly statistical bulletin of the United Nations. The publication estimates free-world output level with 1953 (the fourth quarter wiping out a nine-month lag of 1%).

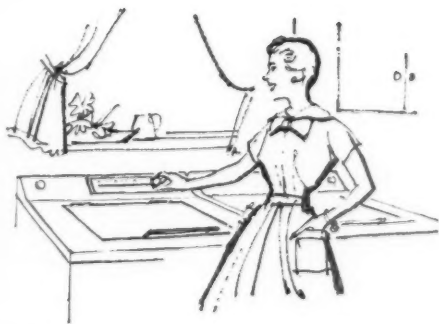
Foreign demand for materials (as any user of nonferrous metals could tell you) has been a major factor in the general price stability.

The influence of world demand for our goods in stemming the recession is difficult to measure, of course. The price-buoying effect, though, clearly aided us through our period of inventory liquidation.

One question naturally arises: Will boom abroad, along with the pickup here, have a too-beneficial effect on world commodity markets?

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In fact, New Departure *ball bearings* play an important role in just about every product with moving parts. For more than 50 years, manufacturers everywhere have counted on New Departure for bearings.

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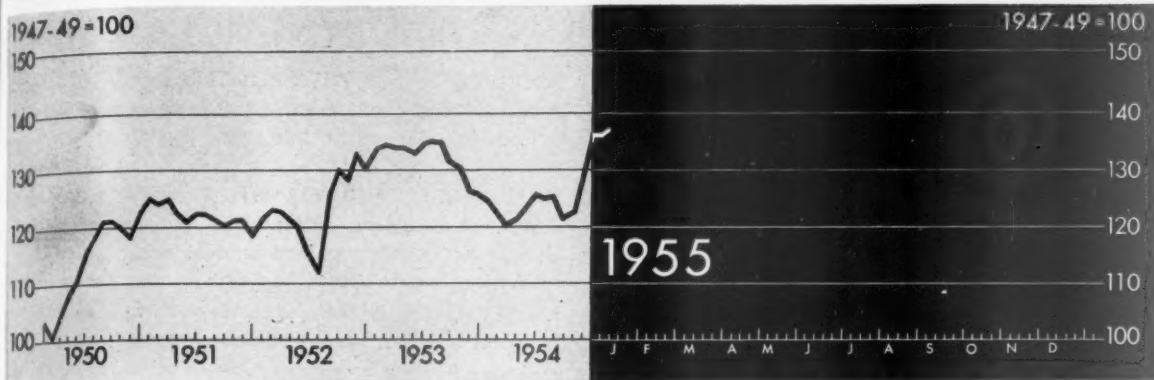
Index to Modern Figuring by Marchant Methods ☐

Descriptive Literature on Marchant Calculators ☐

S-1

MARCHANT CALCULATORS, INC., OAKLAND 8, CALIFORNIA

FIGURES OF THE WEEK



Business Week Index (above)

\$ Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
137.7	136.6	136.6	126.4	91.6

PRODUCTION

Steel ingot production (thousands of tons)	1,975	1,960	1,950	1,772	1,281
Production of automobiles and trucks	179,436	148,436	176,075	152,418	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	\$65,923	\$61,697	\$47,262	\$36,429	\$17,083
Electric power output (millions of kilowatt-hours)	9,833	9,425	9,846	8,825	4,238
Crude oil and condensate production (daily av., thousands of bbls.)	6,574	16,343	6,341	6,284	4,751
Bituminous coal production (daily average, thousands of tons)	1,486	11,699	1,417	1,358	1,745
Paperboard production (tons)	204,172	140,640	258,595	212,013	167,269

TRADE

Carloadings: manufactures, misc., and Lc.I. (daily av., thousands of cars)	61	65	68	65	82
Carloadings: raw materials (daily av., thousands of cars)	38	41	42	38	53
Department store sales (change from same week of preceding year)	-1%	+17%	+1%	none	+30%
Business failures (Dun and Bradstreet, number)	198	152	223	202	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)	413.2	415.5	405.5	418.7	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100)	90.6	190.3	88.9	82.8	+173.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100)	90.8	90.5	90.9	98.1	+175.4
Print cloth (spot and nearby, yd.)	19.2¢	19.0¢	18.6¢	19.4¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100)	144.7	144.7	144.7	141.4	+176.4
Scrap steel composite (Iron Age, ton)	\$34.33	\$34.17	\$32.00	\$28.83	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.)	30.000¢	30.000¢	30.000¢	29.995¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$2.44	\$2.47	\$2.46	\$2.39	\$1.97
Cotton, daily price (middling, ten designated markets, lb.)	34.15¢	34.16¢	34.03¢	32.99¢	30.56¢
Wool tops (Boston, lb.)	\$2.02	\$2.02	\$2.15	\$2.12	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's)	281.8	286.5	274.4	198.2	135.7
Medium grade corporate bond yield (Baa issues, Moody's)	3.45%	3.45%	3.45%	3.73%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	14-14%	14-14%	14-14%	24%	4-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks	57,857	58,445	56,583	55,272	+145,820
Total loans and investments, reporting member banks	85,824	86,534	85,583	80,139	+171,916
Commercial and agricultural loans, reporting member banks	22,334	22,486	22,255	22,942	+19,299
U. S. gov't guaranteed obligations held, reporting member banks	36,573	36,902	36,752	32,861	+149,879
Total federal reserve credit outstanding	26,207	26,371	25,858	26,519	23,883

MONTHLY FIGURES OF THE WEEK

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
Average weekly earnings in manufacturing	December	\$74.12	\$73.57	\$72.36	\$43.82
Employment (in millions)	December	60.7	61.7	60.7	55.2
Unemployment (in millions)	December	2.8	2.9	2.3	2.3
Wholesale prices (U. S. BLS, 1947-1949 = 100)	December	109.5	110.0	110.1	78.7
Housing starts (in thousands)	December	91.0	103.0	65.8	55.9
Private expenditures for new construction (in millions)	December	\$2,202	\$2,347	\$1,917	\$803
Public expenditures for new construction (in millions)	December	\$783	\$938	\$795	\$197

* Preliminary, week ended Jan. 8, 1955.
† Revised.

†† Estimate.

§ Date for "Latest Week" on each series on request.

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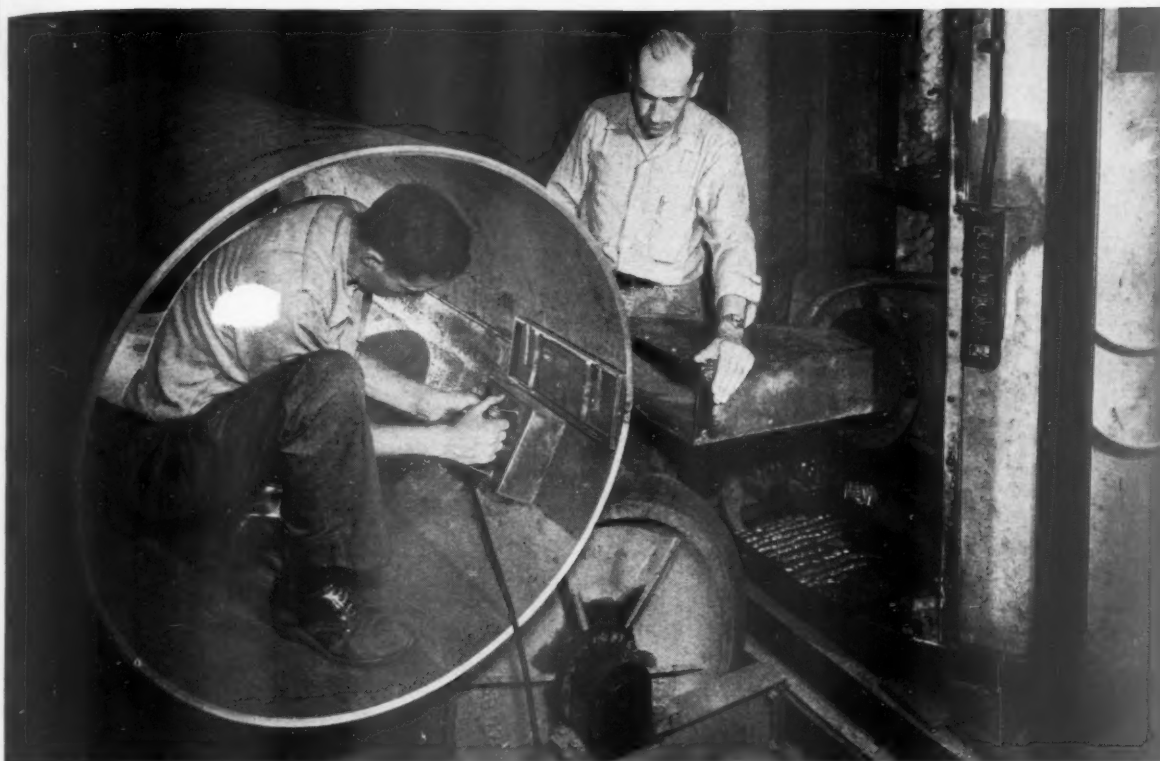
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How x-rays help lengthen a boiler's life

Your eye could never look inside welded boiler seams to see the tiny internal cracks and gas bubbles that are sometimes present. Yet at high operating pressures these hidden defects can quickly lead to a broken seam, a flooded plant, a ruinous shutdown.

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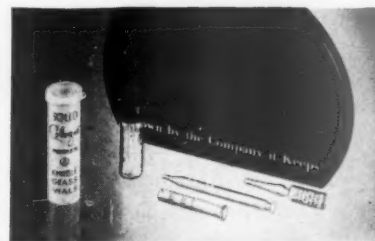
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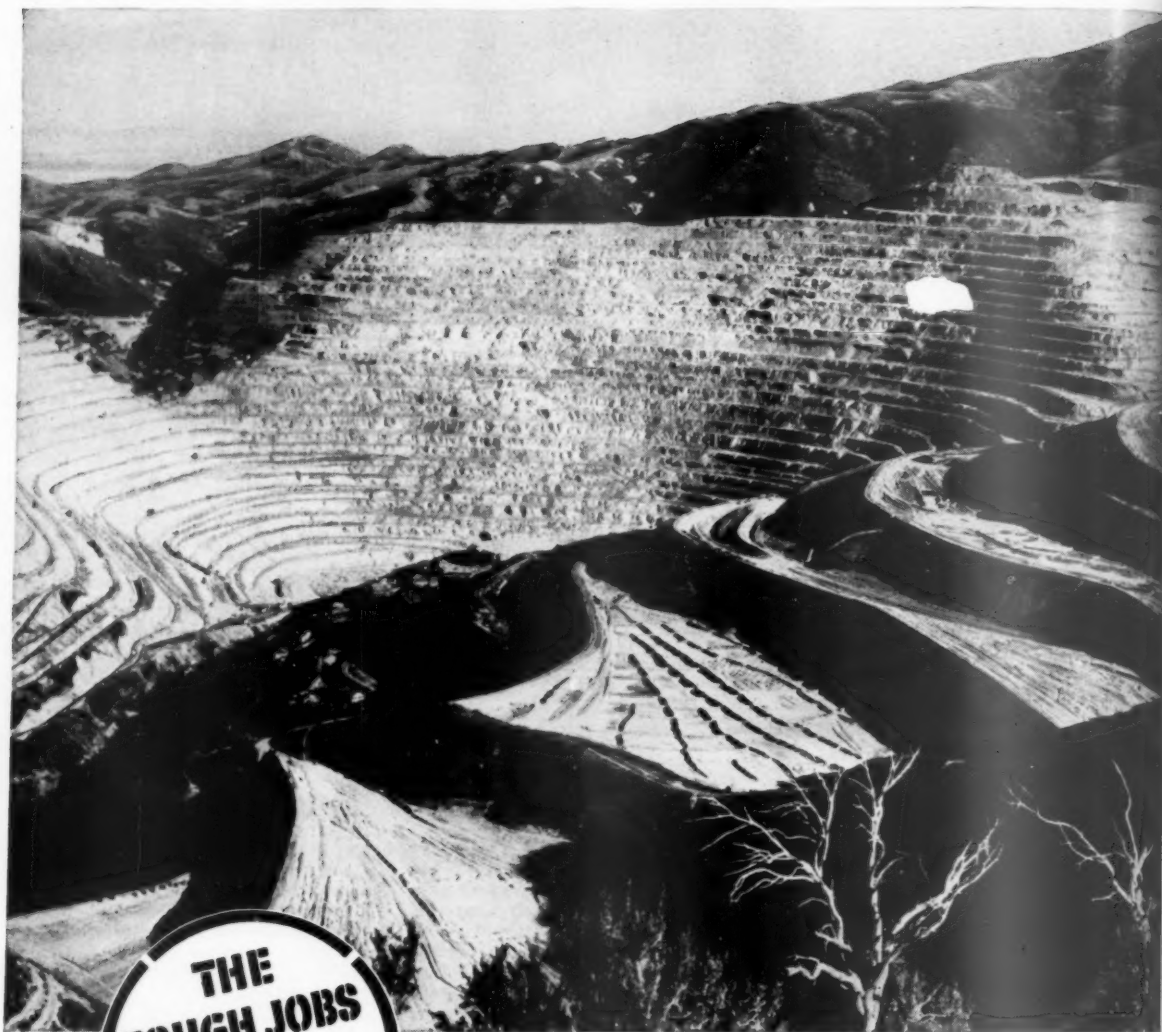
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1955



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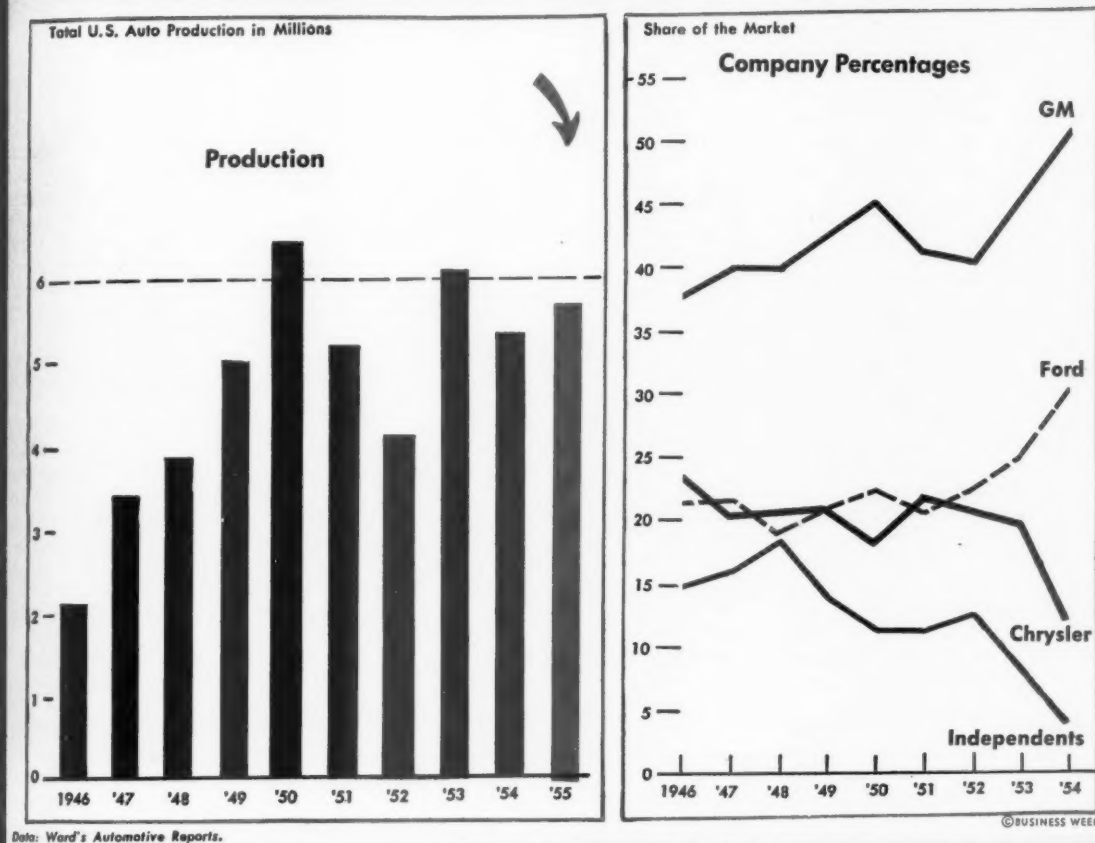
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AUTOS: Higher Output — Will Sharpen Competition



Fast Start—But Curves Ahead

The automobile industry last week started off as if it expected 1955 to be the best year in its history—even while company officials are predicting it probably won't be.

Production of more than 151,000 passenger cars in the first week of this month was the highest since the third week of October, 1950, the industry's record year (chart). Normally, January is one of the lowest production months for cars, yet this January, according to Ward's Automotive Reports, the industry has scheduled more than 650,000 cars. That would be the fourth highest month on record.

Yet auto company presidents have been predicting 1955 domestic passenger car production in a range of 5.5-million to 5.8-million cars. (In 1950, it was 6.7-million.) They are following the lead of General Motors' Pres. Harlow H. Curtice, whose predictions in past years have been very close to actual performance.

Why the difference between what the auto men say they will do, and what their factories are producing now?

• **Sales Up**—First is current sales. Even experienced auto men are slightly surprised at the sales rate of the past few weeks. Normally optimistic about new

models, they felt sales would be good—but not this good.

There has been little letup in the early days of the new year. GM, Ford, and Chrysler divisions report demand outrunning production. It is all spurred, of course, by the number of completely new auto models—more than in any other year.

The high rate of sales has led directly to the second reason for the January production surge: Car stocks in dealers' hands on the first of the year were lower than normal.

• **Inventories Down**—Estimates of inventories vary by as much as 100,000

cars, but dealer stocks probably were in the neighborhood of 350,000. A year ago the figure was about 500,000.

I. Shadow on Production

Industry people now feel a pleasant kind of uneasiness. If sales continue as good as they are now, the factories might not be able to supply a dealer inventory as high as experience has indicated is necessary.

Uneasiness is made more acute because GM and Ford, at least, reportedly want their dealers to go into the spring season with a higher-than-normal inventory. This is desirable because of what Detroiters are terming the "Reuther factor"—which itself may be a strong force behind the present high production rates.

• **UAW Wants GAW**—GM's five-year labor contract with the United Auto Workers (CIO) expires on May 29; Ford's contract lapses on June 1. UAW has said that its main goal this year is a guaranteed annual wage plan, and it has said this so earnestly and so many times that Detroit observers do not see how UAW Pres. Walter Reuther can back down.

UAW implies it will strike to obtain GAW, and says it will seek permission at its March convention to raise a \$25-million strike fund. One of the compelling reasons for GM's proposal to raise \$325-million (page 120) is to obtain operating funds to see the corporation through a strike. Ford, still intent on wresting or retaining sales leadership, reportedly is determined to stockpile cars in dealers' hands as a hedge against a strike.

• **Credit Ready**—The finance companies that underwrite dealer purchases of cars from the factories, probably have the last word on whether dealers can stockpile cars. They give every indication of being lenient with their credit.

That's probably a sure-thing bet for the finance companies. If there is a long strike, the dealers can certainly sell the stockpiled cars, may even run short. If there is no strike, the finance companies can clamp down on dealer credit, and the factories will be forced to slice production in the third quarter to bring annual output back into line.

• **Hard to Guess**—The Reuther factor makes impossible any gilt-edged production estimate for the year. As a production figure, the Curtice estimate of about 5.8-million cars in 1955 strikes most Detroit observers as sound. A GM strike might drop the total to around 5.6-million. If there is no strike, production could exceed 6-million.

II. Sharing Sales

If 1955 car production runs slightly

more than 5.8-million, it appears that GM's share would be 49%, Ford's, 28% or so; Chrysler's might pass 17%, and the "Little Three" of Studebaker-Packard, American Motors, and Kaiser-Willys might take 5.5% of the total.

For GM and Ford, this would mean a decline from those companies' share of 1954 production, when GM had 52.1% and Ford, 30.6%. Chrysler production should bounce back this year from its 13.2% in 1954, and the Little Three should also be due to come up from last year's share, 4.1%.

Because the over-all total this year should be greater than the 5,508,600 estimated by Automotive News for 1954, the drop in the percentage share of production given Ford and GM is greater than the decrease in units they might experience. In 1954, GM turned out 2,874,271 cars, and Ford 1,687,225. If Chrysler and the Little Three make a comeback this year, GM's production may be closer to 2,850,000, and Ford's total around 1,650,000.

• **Company Prospects**—Naturally, no company president would agree to that breakdown. Most are on record with predictions that they will get a higher share of the market in 1955 than in 1954. All can't be right. A coldly neutral eye looking at the competitive situation sees it like this:

General Motors. It has its usual strength in every line. In fact, its car lines are so much better balanced this year that its divisions will be more competitive among themselves. This could result in Pontiac, for example, producing more than 400,000 cars (compared to 370,000 in 1954), drawing some business away from Buick and Oldsmobile.

GM division general managers in the past have been close to the mark in their predictions, but it is difficult to accept their forecasts for 1955 and give credit to the apparent strength of some competition. Buick's Ivan Wiles, however, merely forecasts his divisions will sell more than 500,000 cars in 1955. In 1954, Buick produced 531,000 and is shooting for more this year. It probably can hit 550,000.

Pontiac's Robert Critchfield says he will sell a "minimum" of 450,000—which seems too high. Oldsmobile's J. F. Wolfram is aiming for more than 430,000 production. But if Pontiac and other competition—abnormally low in 1954—stage any sort of comeback, Oldsmobile might have to settle for around 400,000.

And unless there is a much greater expansion of the market than now seems probable, Chevrolet, which produced 1.4-million cars in 1954, should have to back down a bit. Cadillac officials say they will attain 150,000 sales in 1955. They hit their 1954 target—but in the absence of stiff competition.

Ford. The Ford Div. faces about the same prospect as does Chevrolet. Last year Ford produced 1,395,000 cars, and its competition was chiefly Chevrolet. This year Plymouth is back in the picture. It is possible that Ford, as well as Chevrolet, will have to settle for a smaller total this year.

Mercury fell off last year from 1953. This year it should recoup part of its loss, but not enough to go back to 1953's output of 320,000. In that year it was winning a firm place in the lower medium-price bracket.

Chrysler. The appearance and modernization of the whole Chrysler line is the main reason why it seems logical to believe GM and Ford may have to yield some ground in 1955 production.

Plymouth turned out only about 400,000 cars in 1954—less than half as many as in 1953. Dodge last year was down to 152,000 from 294,000 in 1953. Industry observers feel there are just too many present owners of Plymouth and Dodge—who didn't trade in 1952 or 1953—to let those two makes stay at such low levels, even if the cars don't attract new owners from competitive makes.

Another strong point of Chrysler's line is the Chrysler Windsor, which dealers believe is now competitive with the Buick Special. It wasn't in 1954. And the modernized Imperial no longer should let business go by default to Cadillac. Still, outsiders are skeptical of Chrysler Pres. L. L. Colbert's prediction that his company will take 20% of the 1955 market.

Little Three. A prediction of an increased share of production for Studebaker, American Motors, and Kaiser-Willys is based chiefly on the feeling that S-P and AMC, with something new to offer, can hardly do worse than in 1954. Both companies have worked hard on their dealer lineup—a major weakness.

By making the Rambler available to Hudson as well as Nash dealers, American Motors stands a chance of pulling Rambler output up to perhaps 75,000, although AMC Pres. George Romney is aiming at 100,000. In addition, Hudson owners, who were offered nothing new to trade on for several years, now have a new-looking car to tempt them.

James J. Nance, S-P president, has set his sights on 100,000 Packards and 200,000 Studebakers in 1955. The Packard is bound to be real trouble for Cadillac and Chrysler, though in 1954 Packard turned out only 27,600 cars. An increase to 100,000 in one year is a large order. The same applies to Studebaker, which produced 85,000 cars in 1954. Studebaker has one new model coming out, with a wraparound windshield and other refinements. Otherwise it is trying to sell slightly changed versions of its 1953 models.

A Year of Cost Inflation

That's the prospect now. Labor demands and rises in raw materials prices will force costs upward for manufacturers, while competition holds prices down.

Along with an upswing in business through 1955, executives are beginning to see another upswing that they don't like so well: a rise in costs of labor and raw materials.

A price-cost squeeze is nothing new for most businessmen. They have been living with one intermittently ever since their cost items were freed from controls and their own markets turned competitive. This year could be more painful, though. Especially in labor costs, the upthrust looks more rugged, and makers of consumer goods aren't sure yet whether or not they'll be able to pass any of their extra costs along to buyers.

The effect on industry looks like something that could be called cost inflation. Generally, it will cut into profit margins for many producers; with its incentives for more cost-cutting, it could add to unemployment; conceivably it could curb new investment.

• Labor Costs—The main element in the cost inflation will be labor costs. Employers and government economists now expect 1955 boosts in this item to exceed those of 1954. There are at least three reasons to expect this:

• Compared with the gains in other postwar years, the advances in 1954 were relatively small. This wasn't due to any loss of militance among the unions—it came from a realistic size-up of what the employers could stand in a recession period. Now the labor lead-

ers are coming to different conclusions. They see most big employers planning a year of high production, and presumably ready to make liberal concessions to avert strikes.

• Five-year contracts in the auto industry terminate this year. Since 1950, wages in this pivotal industry have been tied to the cost-of-living index and a "productivity increase" formula; the United Auto Workers will be out to surpass the gains of those formulas by gains in direct bargaining.

Whatever happens in autos will affect other industries. Most importantly, David McDonald's United Steelworkers will insist on matching the gains of Walter Reuther's UAW. Steel buyers guess that the wage gain, including some fringe benefits, will exceed 8¢ an hour, may go as high as 12¢.

• Contract negotiations will be more occupied with fringe benefits than in any year since pension bargaining dominated the scene. Fighting issues will include the guaranteed annual wage in autos and electrical manufacturing, the six-hour day in rubber, and liberalization of pension, insurance, and welfare provisions in many other industries.

If conceded, these benefits will raise labor costs sharply; if traded off, they can show up as costly wage increases.

• **Commodity Prices**—The second elevator under manufacturing costs is the cost of raw materials. Here the impetus comes mostly from an increasing world

demand, and partly from a few spotty situations that affect supply.

In steel there is the added fact of an almost certain wage increase. Steel is a raw material for a multitude of manufacturers, and its price movements have wide significance. Steelmakers who will talk price at all admit, "Of course, you'll get a price increase." Steel buyers will try to pass the increase along, but most aren't hopeful.

Last year's steel price rise, based on an 8¢ labor cost boost, was \$3 a ton. Buyers now are bracing themselves for something nearer \$4 a ton.

• **Nonferrous, Too**—Prices of nonferrous metals are also headed upward. In the past week or so, both Alcoa and Reynolds Metals have raised the price of primary pig aluminum and aluminum ingot by 1¢ a pound. With an expanding world market, especially in Europe, pig and ingot have been in greater demand for some time, and prices have been higher overseas. At the same time, European production is down, and the U.S. is taking a lot of aluminum for the stockpile.

Rising world demand also assures a boost in prices of copper, nickel, lead, and zinc. More of these metals are going behind the Iron Curtain, and situations such as the strike in the Rhodesian copper mines (BW-Jan. 8 '55, p.100) are tightening supply.

Rubber prices, too, are rising, and the uncertainty of Far East supplies will keep the pressure on. Rising costs were reflected in last week's 2½% to 5% increases in tires and tubes by U.S. Rubber and Goodyear.

• **Competition**—For most consumer goods makers, the question is this: Can we pass the labor and raw materials cost increases along to our customers?

The tire companies are trying to do so. And a number of other industries are hopeful. But it won't be so easy for the auto companies even to try. Regardless of what factory prices are set, the price actually paid by the car owner depends on the over-all state of the market—and that market is hotly competitive (page 25). Only a hardy company would jeopardize its share of that market by being first to raise prices these days.

Many other consumer goods industries are in the same boat. Their retail outlets are under heavy fire from each other, as well as from the discount houses.

• **No Spur to Buying**—Of course, the pressure to hold prices down would be eased if the consumer market should expand. But government economists see no over-all inflationary trend. If anything, they say, credit will be somewhat tighter next year, and the cost of living will stay put, with farm prices probably dropping a little.



Near-Futuristic Delivery Truck from GM

A star of General Motors Corp.'s annual Motorama in New York next week will be this GMC delivery truck. It's styled by Harley Earl as possibly a preview of a complete revamping of

GMC's truck line a year or so from now. It has front-wheel drive, which allows it to be 10 in. lower and 10 in. shorter than present panel trucks, with no loss of capacity.



LUXURY HOTELS along Miami Beach's ocean front are bursting at their seams as a record crop of tourists takes over the town.

Miami Beach Hotels: 12 Years of Boom

During the next three or four months, 6½-million vacationists will swarm into Florida, making it the state's biggest tourist season ever. Already, Miami Beach hotels—which will bear the brunt of the invasion—are posting Standing Room Only signs. Even the more modest motels lurking on the outskirts of the city report that advance bookings are running way ahead of any previous year.

Obviously, operating a hotel in Miami Beach—particularly one of the luxury places on the ocean front—is a pretty profitable proposition. According to Baron de Hirsch Meyer, president of Miami Beach Federal Savings & Loan Assn., which holds mortgages on about 15 ocean front hotels: “First-class luxury hotels such as the Saxony or Sans Souci figure on a gross revenue of \$7,500 to \$8,500 per room per year. Operating expense, including maintenance, personnel, night club, is \$2,500 to \$3,500 per room. Fixed charges will range from \$1,200 to \$2,500 per room. The liquor concessions cover the loss most hotels sustain

on their restaurants. While taxes must be paid on top of this, profit still may run from 15% to 25%—meaning that owners recapture their money in five years.”

• **12-Year Boom**—This makes it easy to understand why the hotel construction boom in and around Miami Beach in the past 12 years has been so terrific.

In 1942, there were 291 hotels in the city proper. Today, there are 382, with a total of about 29,000 rooms—plus about 20 postwar motels and hotels north of the city limits. “That’s more hotels built since the war than in all the rest of the world combined,” Hank Meyer, public relations director of the city, claims.

While the construction boom seemed to ease off slightly last year, the list of hotels built then is impressive: the 565-room Fontainebleau, costing \$14-million; the Balmoral, a 275-room, \$3-million job; the \$2½-million Bal Harbour; the \$6-million Golden Gate Motel. The Algiers spent \$1-million for additional capacity. Plans for 1955 include two new hotels to be put up on the site

of “old” buildings—the old Pancoast, built about 1923, will be razed to make way for the 300-room Seville, and an ocean front apartment building will be replaced by the 176-room Lucerne.

• **Backers**—Contrary to common belief, only a few of Miami Beach hotels were financed through Reconstruction Finance Corp. loans. Actually, about 75% of the money now comes from two sources: federal savings and loan associations, and individuals. The other 25% comes from the big life insurance companies. In general, S&Ls handle both construction and permanent loans, while the insurance companies take only permanent loans.

In the case of the new Fontainebleau, the owners put up about half the \$14-million. The first mortgage is \$4-million. There is a second of about \$1-million. In addition, the furniture, equipment, and air conditioning are held on “retain title contracts” that may stretch out for 10 years. Rumors of third and fourth mortgages sprang up when the Biltmore Terrace Hotel went to the auction block a few months ago



RESTAURANTS get bigger and fancier as the number of appetites multiplies.



MOTELS, designed to catch the overflow, are fast getting into the luxury class.

town.

NEW PALACES, such as the Fontainebleau, are springing up to handle the crowds.

of Building—and Still SRO

coast, to make and an will be e. n be- hotels action about from loan other rance andle nent anies

with a string of claimants against it.

• **Owners**—For the most part, hotel owners in Miami Beach are made up of veterans in the business, but there are men from practically every other field. The Fontainebleau, for instance, is owned by Ben Novak (formerly a part owner of the Sans Souci on the Beach), a taxicab tycoon, and a bathing suit manufacturer. The Balmoral is owned by Charles Martel, a New York real estate man, and Harry Toffel, who was also a part owner of the Sans Souci and who made his money in the New York City garment industry.

• **Tariffs**—Miami Beach woos the sun worshipper crowd with the latest and most luxurious of hotel accommodations. In fact, the business situation demands that hotels 25 or 30 years old or of inefficient design be torn down to make way for new, modern, luxury hotels. Even so, only 100 of the 29,000 rooms are in the \$45-to-\$50-a-day tariff rate. During the January-March season, a room at the Saxony (double occupancy) may range between \$35 and \$45. But it's also possible to get a

room in ocean front hotels for about \$7.50 per person.

In the off season, the same room will sell as low as \$3 per person, double occupancy. However, according to Samuel A. Rivkind, executive president of the Miami Beach Hotel Assn., "Due to the continued excellence in numbers of people during the summer months, I think the price differential will soon be 30% to 50%, rather than 60% to 75% between winter and summer seasons, as it is now."

• **One Season**—Rivkind says the hotels actually operate on a loss during the summer months, but stay open because of the high maintenance costs of an unused building and the necessity for keeping valued personnel on the payroll. Baron de Hirsch Meyer argues this point. He says the hotels lose money only if they figure their fixed costs on a year-round basis, rather than matching them to monthly income from rooms, an idea that finds some support among accountants (page 102). In any event, he says, it's a cinch the hotels are not losing money.



INTERIORS become more and more exotic, as the tempo of the boom quickens.

Atomic Plan

AEC this week set nuclear fuel prices and spelled out ways in which it will help power plant builders.

The next move toward electric power from the atom is squarely up to American industry. That notice was served this week by the Atomic Energy Commission as it took two important steps to clear the path for private development of atomic power.

- The commission set prices for the first time on nuclear fuels necessary to fire atomic power plants. Industry long has pointed out that it could not plan such plants without fuel cost figures.

- AEC finally spelled out details of its plan for cooperative government-industry development of atomic power. These details contemplate such things as loans of atomic fuels, free services in government laboratories, government subsidy in the form of research funds.

Companies may seek any or all these forms of aid. But AEC Chmn. Lewis L. Strauss hinted strongly that companies seeking the least government help would get the warmest reception by the commission. Bids must be submitted to AEC by Apr. 1.

- **Fuel**—The contemplated loans of nuclear fuels may extend for seven years from July 1. Borrowers must reimburse AEC for any fuel "burned up" in their power plants. They must also pay the cost of reprocessing unspent fuel.

The real importance of this offer is that it lets an atomic plant builder go ahead without making a huge outlay for fuel. An atomic reactor burns up only a small portion of its fuel—perhaps only a few percent—before the material has to be reprocessed. Under the AEC plan, the builder does not need to buy the remaining, and fabulously expensive, 90-odd percent.

A plant builder can get another form of aid—hard cash—through a research and development contract with the commission. The builder's part in the contract is to turn over to AEC all the technical and economic data developed in building and operating the plant. AEC would give this data to "the entire technical public working on reactor development."

- **Prices**—The commission did not announce the prices it had set for nuclear fuels. Prices will be given only to "properly cleared" persons.

The commission promises that it will maintain the prices it has set for several years—subject only to "substantial changes" in the Bureau of Labor Statistics' wholesale price index.

Eisenhower Lays It on the

He Asks Congress for a Dozen New Programs

PROGRAM	MEANING	CONGRESS' FEELINGS
Highway expansion	Calls for \$25-billion federal money over next 10 years. Special message Jan. 27.	<i>Chances good, but opposed by economy bloc.</i>
School construction	A surprise. Calls for "positive action" to ease shortage. Details Feb. 15.	<i>Chances fair; bound to revive old quarrels.</i>
Transportation policy	New legislation probable; background study aims at helping railroads.	<i>Lawmakers cool to anything that looks like a rail fight against airlines and trucks.</i>
Water policy	Broad program being prepared on government-business partnership principle for water and power projects.	<i>Not much chance if Democrats can turn it into a public power fight.</i>
Public works co-ordinator	Another surprise. Calls for White House aide to watch over federal, state, and local planning.	<i>Chances good.</i>
Minimum wage changes	Asks 90¢ minimum instead of present 75¢; recommendations on broader coverage to follow.	<i>Chances good.</i>
Military reserve	Asks for 5-million trained men on call.	<i>UMT foes against this plan, but chances are fair.</i>
Aid for low-income farmers	Bobbed up in the program only few weeks ago, to surprise of President's own agricultural planners; details later.	<i>Congress waiting to see what's coming.</i>
Disaster assistance	Asks that states pay a share of drought and other types of aid.	<i>Congress cool.</i>

Economic Plan With Po

Pres. Eisenhower this week began filling in details of what he means when he talks about an expanding economy and a "moderate, progressive" political party. As this table shows, there were surprises for both businessmen and politicians in the series of messages he sent to Congress.

He is proposing a bigger public

works program than expected. On top of his long-awaited highway project, he is calling for immediate expansion of school construction. He wants 70,000 federal housing units over the next two fiscal years, and a new White House co-ordinator of public works. He plainly puts a massive public works program high on his list of federal re-

t on the Line for Democrats

PROGRAM	MEANING	CONGRESS' FEELINGS
Military pay and benefit changes	Better medical care, housing and survivor benefits, plus selective pay raises — designed to hold career men in service.	Chances good.
Health and accident insurance for workers	Asks non-occupational disability be insured in District of Columbia as forerunner of national program; also workman's compensation for longshoremen and dock workers.	Congress caught by surprise, waiting for details.
Eight-hour law for federal contractors	Purpose is to assure overtime after 40 hours.	Congress friendly.

He Wants These Existing Laws Extended:

Corporation income tax and excises; Defense Production Act; Draft Act; Small Business Administration Act.	Strong bi-partisan support; trouble possible on excises.
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He Revives These Suggestions for Another Try:

Foreign trade and investment	Three-year extension of Reciprocal Trade Act, rejected last year, plus tax credit on income earned abroad by U. S. corporations.	Trade act passage seems certain; tax credit under strong fire.
Federal housing	Eisenhower still wants 35,000 units a year for next two years.	Chances good.
Taft-Hartley revision; lowered voting age; reinsurance plan for health insurance	_____	Not much interest in Congress; may get side-tracked.
Hawaiian statehood	_____	Less chance than last session unless Alaska is added.

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Political Meanings

sponsibilities—things he feels are needed if the economy is to grow along the lines he foresees (BW—Oct.30'54,p27).

Eisenhower's stress on public works, combined with a wide range of social welfare recommendations, puts Democrats on the defensive. They have to surrender a dream of having things entirely their own way in Congress. In-

stead of investigating the Republicans and passing a minimum of laws as they had hoped (BW—Jan.8'55,p30), they must wrestle with a half-dozen major new proposals. Their job is all the tougher because Eisenhower's series of messages bears down hard on issues they have long held dear.

• **Strategy**—It adds up to a program

that may well keep Congressional Democrats off balance. They'll either have to buckle down to hard work on the new proposals, or lay themselves open to charges of playing politics with such explosive issues as schools, the minimum wage, and sickness and accident insurance for workers.

Whether Congress follows Eisenhower or winds up opposing him, Republican strategists believe the program he is laying out will make the task of retaining the White House in 1956 easier. The program also strengthens his hand against the right wing of his own party. Republicans who have opposed such ideas as more liberal trade policies, federal housing, and broader social security legislation may find their voice weaker than at any time in the past 10 years.

• **Public Works**—In itself, Eisenhower's stress on public works is not surprising. It has long been indicated as a key to the expanding economy he seeks. But the vigor of his words, his addition of school construction as an immediate need, and the request for a White House co-ordinator are all new.

The Administration had originally planned to wait for a White House conference on education this autumn before getting down to cases on schools. Aides say the President decided the need for additional classrooms was too great and too obvious to justify delay. White House officials may also have had their eye on Sen. Lister Hill of Alabama, leader of a group of senators who planned to force through a Democratic-sponsored school bill this session. The President's swift move took the steam out of their drive.

• **Needs and Means**—There's no dollar measurement yet on what the Administration will propose. Present spending for schools and colleges is \$2.5-billion a year. White House experts believe over \$6.5-billion a year would be needed for five years to provide enough classrooms. This indicates a maximum additional expenditure of \$20-billion, but the recommendations may call for considerably less than this as a starter.

As in the case of roads, the chief problem as seen in the White House is how to split the school program's cost between federal and local sources, and how to finance both parts. There's no decision yet, but the President may wind up recommending a federal agency that can issue bonds—again following the pattern set by the highway proposal.

• **Highways**—A federal financing agency of this kind was recommended to the President this week by a special committee on highways, headed by Gen. Lucius Clay. The recommendation calls for a Federal Highway Corp. It would issue bonds to pay for the government's share of the \$50-billion highway improve-

ment program envisioned by Eisenhower (BW—Nov. 20 '54, p26).

Bonds of the corporation would be outside the federal debt. Projected revenues from the present federal 2¢-per-gal. gasoline tax would more than meet all financing costs. Banking experts have approved the financing plan as feasible.

• **Track-Keeper**—The public works coordinator, if the job is approved by Congress, will watch over all phases of public construction on behalf of the President. He will operate in much the same way as Robert Cutler does for defense matters and Joseph M. Dodge does for foreign economic pro-

grams. These men are members of Eisenhower's immediate staff.

The co-ordinator would not supervise programs, but would keep track of projects under way and planned, with an eye particularly on the general economic situation. If inflation threatened, he'd recommend projects that could be slowed down. If a sharp business downturn threatened, he'd come up with a list of projects that could be started swiftly.

Eisenhower's new emphasis on public works doesn't mean he thinks the federal government must lead the way to economic expansion. He's counting on private investment to do that.

Is It Censorship—or What?

The Commerce Dept. is taking a wary look at a controversial problem: censoring technical and industrial information that isn't officially classified as unpublishable by the military.

Actually, the department says it's not interested in censorship at all. It's just trying to see what can be done about keeping non-classified material from reaching the Communist nations.

The department has set up an Office of Strategic Information under Bell Telephone Laboratories' R. Karl Honaman. The idea behind it isn't new, but the furor stirred up by its creation has been just as supercharged as that which arose when Commerce Secy. Sawyer, under the Democrats, took a step or two in the same direction.

• **Split**—The furor comes from a fundamental split—in the press, in industry, in scientific circles, and in government itself—over the correct answers to such questions as these:

• Is information being published that helps the Reds? Most people would say yes. But you run into differences again as to how much help the Reds get, particularly if you begin discussing specifics.

• If the Soviets are helped, is there anything that can be done about it? If something can be done, should it be done? These are the two main areas Honaman's new office is exploring.

• **Standing**—Honaman's office got off to a bad start with some publicity that confused its operation with that of Commerce's Bureau of Foreign Commerce. That bureau requires an exporter to get a license before shipping overseas such militarily unclassified items as blueprints, flowsheets, pictures, models, or catalogs—if the item represented or described (a plane, for instance) would itself involve licensing for overseas shipment.

Many press reports tied this licensing operation to Honaman's office, and said that OSI would regulate export of technical publications. Actually,

OSI is purely an advisory group; it has no power to issue orders.

• **Thinking**—Whether anything ever comes from Honaman's operation, OSI won't be taking any action quickly. Honaman and his assistant director, Philip W. Swain, who is on loan from McGraw-Hill Publishing Co., emphasize that they are only studying the problem and haven't yet come up with any answers.

Honaman's job came as a result of a Presidential directive to Commerce Secy. Weeks to look into the problem. Pres. Eisenhower noted that the National Security Council felt the subject needed exploring. The general Washington feeling is that the Pentagon is the real pressure behind the scenes—that the generals and admirals feel too much technical and industrial information is made too easily available to any Russian official who cares to buy U.S. publications and ship them home.

Some scientists agree. Dr. Vannevar Bush, for instance, believes a line should be drawn between "information that the electorate must have for its reasoned judgment, and the technical and military information which is not necessary for that purpose; and having drawn the line, we need to hew strictly to it."

Others say this hits the nail right on the head. But they ask: Who's to say what unclassified information the public should have? This is the point where some editors are ready to differ. J. Russell Wiggins of the American Society of Newspaper Editors has a view that many newsmen hold: If information is a military secret, then let the military classify it. Otherwise, they say, any attempt to hold it back would be a threat to freedom of the press.

• **Cooperation**—Honaman says he's really counting on voluntary cooperation. He would like to establish a "gray zone" classification that would give him and his aides a chance to advise against release or publication of the materials.

Bedfellows?

Truck and rail men, bitter competitors in the past, formed a bipartisan council last week.

Transportation men are watching warily, yet hopefully, a new industry group that set up shop in New York last week.

The group is titled the Council of Rail & Truck Common Carriers. It consists of the presidents of seven railroads and seven trucking companies. Co-chairmen are Walter J. Tuohy, president of the Chesapeake & Ohio Ry., and D. L. Sutherland, chairman of Middle Atlantic Transportation Co., Inc.

The council's stated purpose is "to endeavor to cooperate with and assist the President and the government in furthering the objectives of a sound national transportation system." What that means in terms of specific action, nobody is quite sure. But transportation men think they see two possible objectives behind the council's formation.

They think, first, that some truckers and rail men want to call off the increasingly shrill publicity war that the two industries have been fighting. And they think, second, that both groups in the council are worried by stiffening competition from contract truckers that are subject to far less government regulation than either the rails or the common carrier trucks.

• **War**—The truck-rail war has become unpleasantly hot for both sides during the past few years. Rail men have complained loudly to the public that truckers get all the breaks. Railroads must build their own roads, the rail men have said, while truckers have roads provided for them—partly through taxes paid by the railroads.

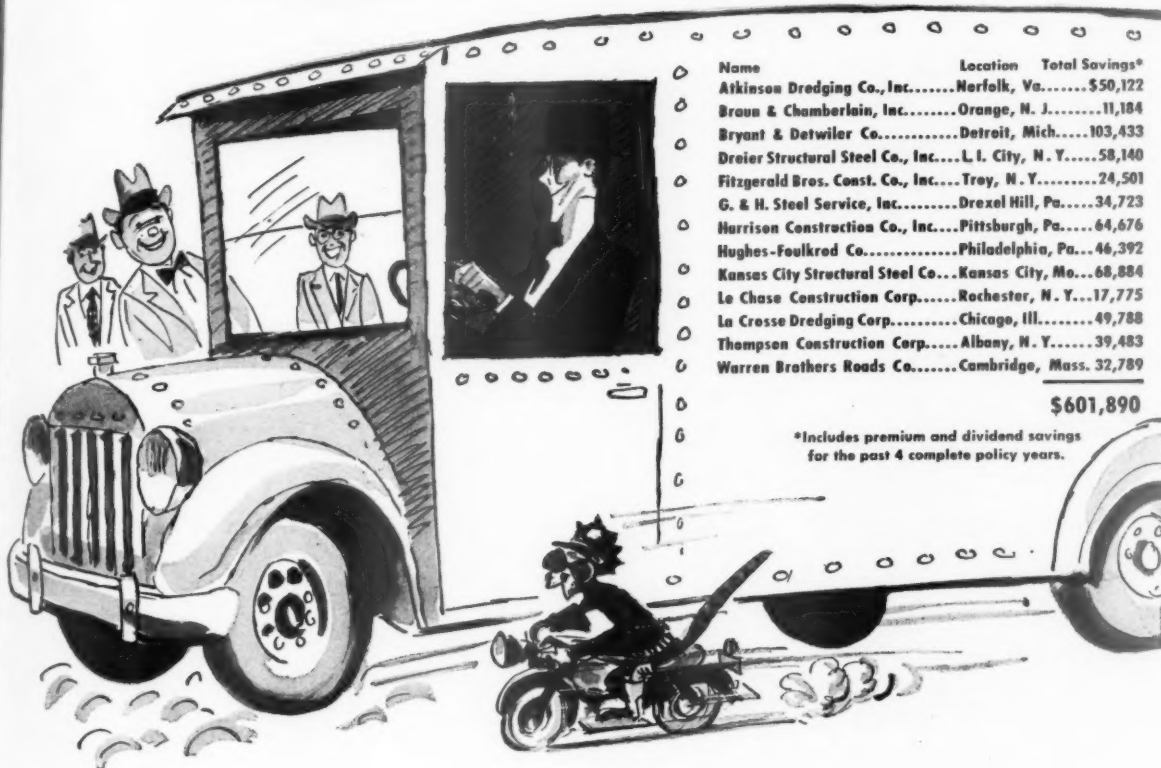
All members of the council deny that this suit had anything to do with its formation. But if the council succeeds in calling off the mutually damaging public exchanges between the two industries, nobody will be surprised if the suit gets lost in the process.

• **Absentee**—One of the nation's largest truckers, Riss & Co., Inc., of Kansas City, was notably absent from the council's meeting last week. Riss has filed a \$90-million suit against 85 railroads and four railroad associations (BW—Sep. 25 '54, p134).

Robert Riss, president, said the council's formation came as a complete surprise to him. "We will await with great interest," he said, "any concrete accomplishment. . . . This has no bearing on our suit whatsoever."

13 FIRMS SAVE \$601,890

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BUSINESS BRIEFS

Meat eaters have no need to lay down their forks in 1955, the Commerce Dept. opines. Beef prices should stay at 1954 levels, thanks to a slaughter expected to duplicate last year's record 39.4-million head. And pork prices are expected to drop, in the wake of a 16% increase in last fall's pig crop.

Color TV hopefuls pricked up their ears when RCA cut the price of its 21-in. tube to \$100 from \$175. But the company has not lowered its suggested retail set price of \$895. It says the cut in tube price was to encourage greater production of color sets.

All's noisy on the New Haven (BW-Jan. 8 '55, p85). Frederic C. Dumaine, ousted head of the railroad, accuses Patrick B. McGinnis, who replaced him, with fogging the company's earnings picture and holding rump sessions of the board. Two Dumaine backers—Pres. Morgan Brainard of Aetna Life and Chmn. R. E. Pritchard of the Stanley Works—have resigned from the New Haven board in protest. Meanwhile, McGinnis has recommended that the New Haven pay a 10% common dividend. And friends of his are facing a proxy fight for control of the Boston & Maine (BW-Jan. 1 '55, p24).

Canada's government has moved to block the sale by British Columbia of Columbia River hydro rights to Kaiser Aluminum. Ottawa is pushing a bill requiring federal licensing of such deals. It argues that the \$1-million-a-year fee to the provincial government is much too low, and that in any case the province should not sell to a U.S. company hydro power that will be needed by home industry.

Dixon-Yates financing plan for a \$107-million power plant has the blessing of SEC lawyers. Normally, that would mean that the commission would approve the plan, which is under fire by public power advocates (BW-Nov. 13 '54, p27).

Surplus farm goods in government hands kept on rising in November to a \$6.9-billion total, although the Agriculture Dept. reports that \$800-million worth have been disposed of since mid-1954, mostly by sale but some by gift. In October, exporters shipped \$315-million worth abroad, a rise of 30% above October, 1953.

The New York Central has declared a 50¢ dividend for the first quarter, payable Mar. 10. The last previous dividend, also 50¢, was in January, 1954.

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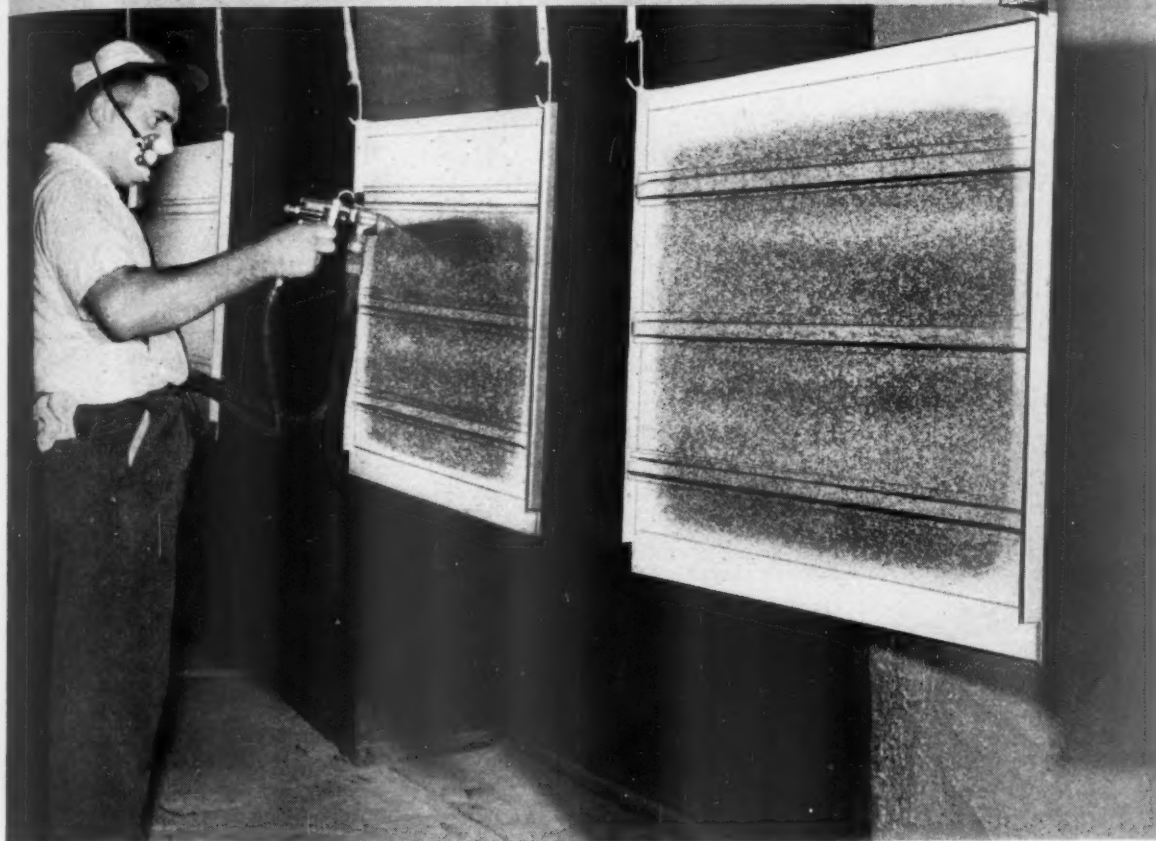
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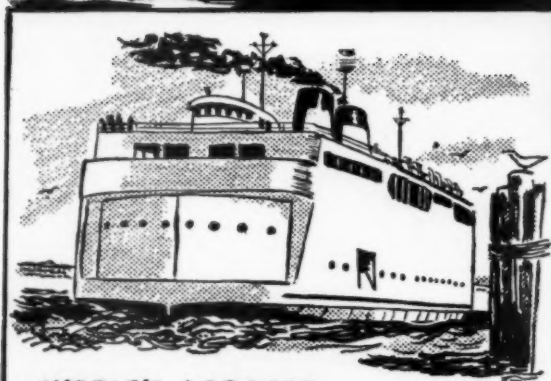
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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
JAN. 15, 1955



Odds that Eisenhower will try for a second term are on the rise.

The President is saying nothing publicly about his 1956 intentions. It's even doubtful that private commitments are being made to party leaders; such things always leak. A President who keeps Congress guessing about his future is in a stronger position than an avowed candidate.

But politicians think they see the drift—signs that Eisenhower will run again in 1956. It's an interesting fact that the leaders in both parties read the signs the same way.

Take the Eisenhower proposals to Congress, for example—the stands on highways, schools, reduced draft, help for small farmers, future tax cuts, small business, more health benefits (page 30). The appeal is broad.

Another signal is the plan for a late 1956 convention to nominate the GOP candidates for President and Vice-President. A September convention wouldn't leave any dark horse much time to campaign before the November voting.

And there are changes in Eisenhower's own attitudes. News photos still show him looking longingly at his remodeled Gettysburg farm home, and there's no doubt that he dreams of how he will live there. But he doesn't discourage party leaders who want to talk about why he should run again. Associates say he finds the job of being President easier and easier to take as he looks forward to good times at home and no war abroad.

The Democrats see tough political going ahead. Eisenhower's program, as it unfolds, is robbing the opposition of issues it had counted on.

There's a split on tactics. Conservative Southerners, taken as a group, rather like Eisenhower and his program. They see little chance of winning the White House in 1956, especially if Adlai Stevenson is again the candidate. And they see little chance of sidetracking Stevenson.

The old New and Fair Dealers want a fight. They back Stevenson and feel that Eisenhower must be torn down between now and 1956 if their man is to win. You pick this up inside the ADA—the Americans for Democratic Action. And it's much talked about inside the National Committee, where Stevenson is strong. But Democratic leaders in Congress seem very reluctant to go after Eisenhower directly.

That's the background for GOP optimism, which is climbing day-to-day. A good many House and Senate Republicans find fault with Eisenhower's plans. These are "too New Dealish" to suit them. And they squirm when Democrats crack that it's too bad Eisenhower is in the Republican Party. But even these critics recognize the political appeal of both Eisenhower and his program, and what this means in terms of the 1956 political outlook.

Eisenhower got the jump on school aid, which the Democrats had planned on using to make political hay.

Here's the story: Secy. Hobby of Health, Education & Welfare has been conducting a study of school needs, with the idea of coming up late this year or next with plans to help states fill construction gaps. Democrats had figured this would give them time to launch their own program in Congress and get ahead of the Republicans. So Eisenhower picked up the issue

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
JAN. 15, 1955

in his State of the Union message, with detailed recommendations to be made later in the session.

—•—
The highway program has political appeal. Eisenhower will push these plans hard. The general idea is to double all road building outlays for the next 10 years—push them up from the present level of around \$5-billion annually to \$10-billion, with Washington putting up something close to \$2.5-billion of the additional sum yearly.

The fight will be on financing. Some Democrats see the plan to raise the money outside the regular federal budget as a GOP effort to hold down the official budget, while increasing expenditures. But chances are that a start will be made on bigger highway spending, no matter how the money issue is finally disposed of by the House and Senate.

Other spending projects are in the mill—more money for such things as reclamation and Army Engineer programs, schools.

—•—
Public works figure high in Eisenhower's economic planning. The total for roads, schools, hospital facilities, reclamation projects, and the like will be the highest ever hit by Washington. The President's advisers see this as "insurance" on economic growth goals they are setting. The actual rate of federal public works spending will change from year to year—be increased if the nation faces economic slack, be reduced if inflation threatens. It's these big spending plans, more than anything else, that bring the charge of "New Deal" from Administration critics.

—•—
A plan to help small farmers will come later, in a special message. Right now it's little more than an idea. But GOP congressmen hope it turns out to be something good. Continued weakness in farm prices might well be more of a political problem in 1956 than it was in 1954.

The Democrats will hold back on their plans until they see what it is that Eisenhower has in mind for the small farmer. If the Administration plan turns out to have more appeal than the old rigid, high supports of the past, the Democrats may be hard put for a 1956 farm issue.

—•—
The 75¢ minimum wage will be raised. It seems sure to go to 90¢, and the Democrats may push it up to \$1.

The hot political fight will be on coverage. The Administration not only wants the higher minimum, but it wants to apply the Wage & Hour Law to millions of workers not now covered.

—•—
Note the naming of Sen. Douglas of Illinois as the Democratic head of the Joint House-Senate Economic Committee. This is the committee that reviews the President's Economic Report. Last year it was Douglas who led the attack on Eisenhower's policies as leading toward depression. Then the slide halted and recovery set in. But Douglas, who beat out Sparkman of Alabama for the committee chairmanship, still isn't satisfied with Eisenhower's handling of the economy.

—•—
The political push will be toward the left for the next two years. Eisenhower's program leaves the Democrats little choice but to move in that direction. As they move, they will tend to bend the GOP line. But the drift will be gradual, as long as times are good.



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LOCAL BUSINESS

Bonanza Auto Show

HOUSTON—With some \$3-million worth of cars and \$15,000 worth of entertainment, the biggest auto show ever to hit the Southwest opened here last Saturday. By midweek, there was little doubt about it: It was a howling success.

Sponsored jointly by Houston's automobile dealers and Rotary Activities, Inc., the show was sparked by 61-year-old Arthur Derby. Derby, a partner in a woodworking-equipment distribution firm, got the idea from a similar exhibit promoted by the Rotarians in Nashville last winter (BW—Feb. 20 '54, p. 32). Like Nashville, Houston is turning over the proceeds from its show (admission: \$1) to Little League baseball.

Sam White, president of the auto dealers' association and an Oldsmobile dealer, estimates that between 150 and 200 cars were sold from the floor of Houston's Coliseum in the first two days alone. Harry Burkett, chairman of the dealers' show committee, says that Plymouth sold all seven of its display cars in the first two hours, and that Ford and Chevrolet each sold more than 20 cars the first day.

"It's a bonanza," Burkett says. "This show is doing more to smoke out car buyers than anything we've ever seen." On Sunday, more than 3,000 people waited in the rain to get in, and by midweek there seemed no question that the Rotary would get the \$200,000 it wants for the Little League.

Merger Under Fire

NASHVILLE—The proposed merger of the Nashville, Chattanooga & St. Louis Ry. with the Louisville & Nashville RR. has this Tennessee city up in arms.

The latest move in a fast-developing fight was a statement by State Rep. Sam Jenkins that he will ask the Tennessee General Assembly to authorize a full investigation of the merger. Jenkins says he wants an appropriation of \$50,000 to put counsel, accountants, and other investigators to work on the plan.

The main opposition to the merger stems from the fact that it will cut Nashville down to one major railroad (the city is now served by the L&N, the NC&St.L., and the Tennessee Central, a smaller line).

The feeling is that the railroads will gain little by the merger, and that Nashville will lose a great deal—an estimated 1,000 jobs through the closing

of the NC&St.L.'s general offices, plus immeasurable loss in its ability to attract new industry. The plan would eliminate the NC&St.L. and make a joint system, all L&N.

Prison Oil

DETROIT—The citizens of Detroit have struck oil—literally.

Last month, Woodson Oil Co., Fort Worth, Tex., hit oil on property owned by the city at its House of Correction in Plymouth Township. At present estimates, the city may get \$60,000 a year from it.

Production at the well will start at 200 bbl. a day, and may eventually

reach the 400-bbl. limit set by the Michigan Conservation Commission. Under the lease to Woodson, the city collects royalties on a sliding scale based on the gross output of the well. If production should reach the 400-bbl. mark, Detroit coffers would be \$150,000 a year richer.

Woodson got drilling rights on the 1,192 acres of prison property last October. It agreed to pay the city \$1 an acre for mineral rights, a "bonus" of \$19,703, and a base royalty of one-eighth of total oil and gas output. During drilling, Woodson sealed off a deposit of nearly 10-million cu. ft. of natural gas, which may be tapped later.



Toppled Steeple Soon Will Rise

BOSTON—The steeple of historic Old North Church, which fell during Hurricane Carol (picture), is going to be put back in place this spring.

With a pool of cash assured by three fund-raising drives, the Lantern League of the Old North Church last week chose F. H. McGraw & Co. to start actual reconstruction work. McGraw, which says the job may involve the use of a helicopter, is donating its contracting services free.

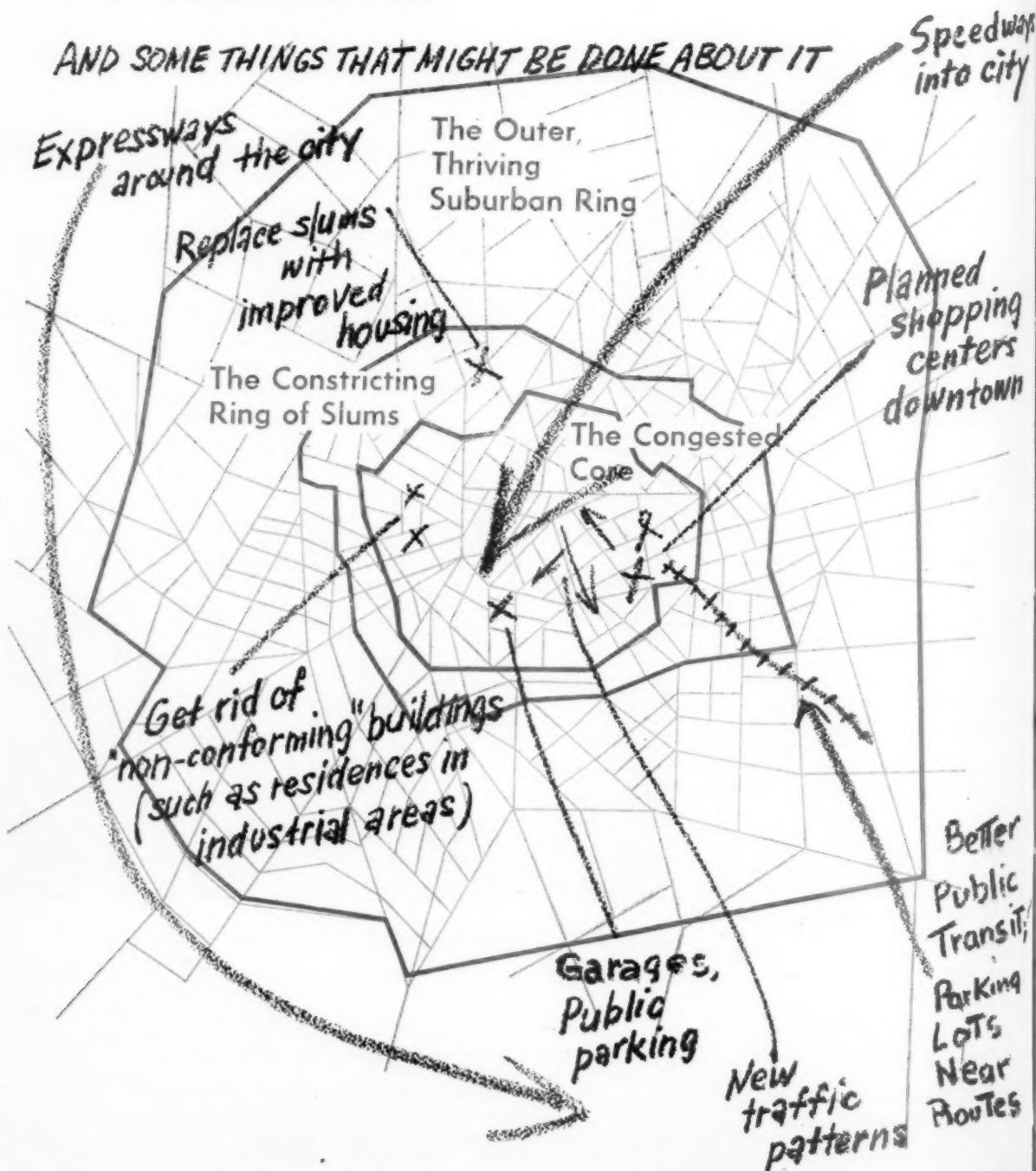
The over-all cost to put the steeple back where it was when Paul Revere started his ride has been estimated at \$130,000. That figure may turn out to be high, however. McGraw's president, Clifford S. Strike, has already had a number of offers from suppliers who want to donate materials to the job, including one from an oak-tree owner who is ready to let McGraw chop away to get the four 46-ft. beams that are needed as structural members.

MARKETING

Retailers' Problem: Reviving

The Urban Dilemma

AND SOME THINGS THAT MIGHT BE DONE ABOUT IT



Sick Old "Downtown"

U. S. merchants are going back downtown to do the biggest planning job in their history. They must revitalize the central cities, which have decayed at the core while the suburbs have been growing and flourishing.

Their interest is understandable. If something isn't done about the problems of the city, downtown merchants stand to lose not only a lot of customers but also a considerable real estate investment. And the situation in many cases is becoming critical.

The classic case among U. S. cities is sprawling Los Angeles. Back in 1919, the downtown area did 74% of the retail business of Los Angeles County. In 1950, the figure was 35%; in 1954, 29%. Dallas is another exhibit. The latest Bureau of Census figures show that retail sales in downtown Dallas over the 1947-1953 period stayed at \$170-million, while total retail sales for the metropolitan area rose from \$226-million to \$837-million.

• **Program**—The scope of the job was made clear this week by a statement from Philip M. Talbott (cover), senior vice-president of the Woodward & Lothrop department store in Washington, D. C. Talbott, who has just been elected president of the National Retail Dry Goods Assn. at the annual meeting in New York City, announced a new major program. NRDGA's chief target this coming year, he said, will be the rehabilitation of downtown areas.

"This effort involves a frontal attack," said Talbott, "on the problems of rapid mass transportation facilities, slum clearance, parking, and the many other facets that enter into urban life."

It is clear that retailers have learned to look well beyond the curb in front of their stores. In March, NRDGA will sponsor a national meeting of all the major groups involved in some way with what is now often called "urban renewal." The meeting will include national organizations of newspapers, realtors, mayors, transit companies, and others. The aim: to get common agreement on the nature of the problem and to develop a master plan to guide cities.

• **In Progress**—This week NRDGA also released the results of a nationwide sampling of its membership, the purpose of which was to find out what are the major problems and what, if anything, is being done about them. The replies show not only that there is an intense interest in the problem throughout the country, but also that much activity has been generated by it. Here

are some of the current projects:

Flint, Mich., is developing a one-way street system to speed traffic through the downtown area. Denver voters have approved a \$4-million bond issue to create off-street parking facilities. Danville (Ill.) businessmen have subscribed \$125,000 to a parking corporation. Stockton, Calif., provides free bus transportation downtown for shoppers on sale days. New Kensington, Pa., is launching a face-lifting program for the downtown business district.

And so it goes. City after city across the country is making a stab at curing the ills that plague it. There are some very ambitious plans under way, several of which have already received considerable publicity. For instance: Pittsburgh's re-doing of the Golden Triangle area; Philadelphia's ambitious plans for the "Chinese Wall" of the Pennsylvania RR that used to divide the town; Boston's proposed big Back Bay center for business, pleasure, and shopping. There are elaborate programs of slum clearance and civic improvement going on in Baltimore, St. Louis, Chicago, and Indianapolis to name four cities in which merchants have played a big role.

Many of these projects have been spurred by Title I of the Housing Act of 1949, which offers federal aid in clearing blighted areas for redevelopment. A 1954 liberalization of the act is expected to spur urban redevelopment even further. There are in all an estimated 1,000 redevelopment authorities in the country today, mostly at municipal level.

I. The Houston Example

Although a number of these plans are comprehensive in nature, there is a big question whether many of the programs under way are sufficient to deal with the evils involved. Piecemeal reforms sometimes can do no good at all. In some cases, they even help to increase the evils they are meant to cure.

Houston provides an interesting example of how partial planning can let things drift further out of whack. A few years ago Houston started a determined effort to build itself a number of parking garages. The results have been impressive—6,732 places for cars already, and more spaces a-building.

But observers feel that Houston is still desperately short of parking spaces. Auto registrations in Harris County went from about 200,000 in 1947 to 400,000 last year. Observers wonder,

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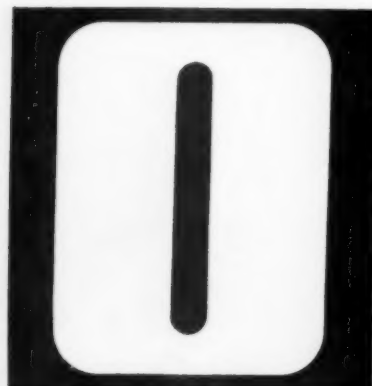
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too, what is going to happen a few years from now when an ambitious program of speedways will be finished, funneling still more cars downtown.

Meanwhile, something else has been happening. In 1947, the public bus system carried 106-million passengers. Last year it carried about 65-million—indicating a huge increase in car traffic into the city. Out of this experience has come a new thought for the bustling Texas city. Says an observer:

"One answer appears to be fringe parking—developing a system of cheap, easily accessible lots around the edge of the business district. These lots would be linked to the downtown by bus."

The idea has been tried out elsewhere. Boston, for example, has been creating parking lots on the outer reaches of its subway system. Whether this incipient movement is going to help to revive the nation's troubled public transit systems remains to be seen.

• **Transit**—One thing is certain, however: There is fresh evidence to show that public transit is a much more important element than many people thought a few years back. Two recent studies have served to develop this point. One was a study of shopping habits in downtown and suburban Boston, made by Boston University (BW—Oct.23'54,p1); the second, released this week by Ohio State University, examines shopping habits in Seattle, Columbus, and Houston. In Boston it was found that only 22% of people who go from suburbs downtown to shop do so by car. In Seattle 39%, and in Houston and Columbus 55% of the people said that they used a car the last time they went downtown to shop.

The trouble is that everyone's attention has been focused for so long on the problem of parking space that other problems have been neglected. Admittedly, merchants find parking the most galling and ever-present problem downtown. But parking is actually only a part of the problem, as is plainly shown in the Houston case.

II. More Than One Approach

Today, the experts in city planning have devised a whole series of approaches to the problem of urban renewal. These can be divided roughly into four main groupings:

Get people in and out quickly. The general idea here is to use all methods that can make the downtown area more accessible and to improve traffic conditions. You can improve public transit, build parking garages, improve traffic flow on existing streets, put expressways around town for traffic heading past the city, and put speedways into the city for traffic heading in and out.

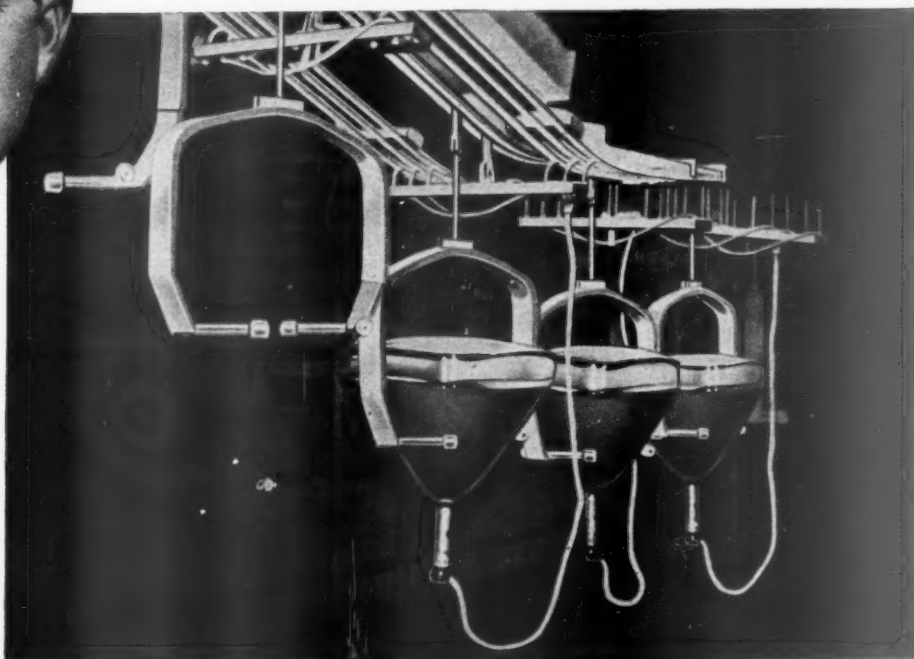
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MICHAEL F. CALLAHAN

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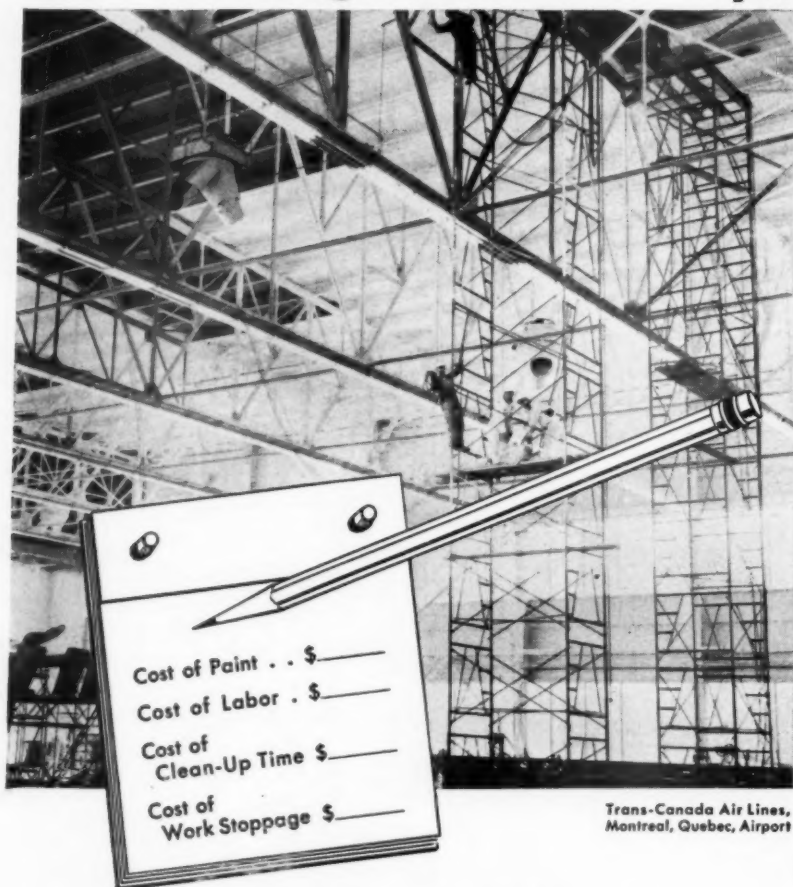
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FLOORS 

WATER REPELLENCE 

Gruen, the designer of the big Northland shopping center built by J. L. Hudson Co. in suburban Detroit, urges the separation of pedestrians and vehicles where possible. One way is to create downtown shopping centers for foot traffic only, on the order of the new Lijnbaan shopping center in downtown Rotterdam (BW—Jul. 17 '54, p106). Cities could set aside whole blocks and streets as pedestrian malls during the daytime.

Use the land properly. This is, of course, a vast and complex problem, fraught with difficulties involved in land value, zoning, and other aspects of urban real estate. In essence, however, the idea is to use a city to the purpose for which it is best suited. It means, as a simple illustration, getting residential buildings out of industrial areas.

Rebuild the slums that constrict the center of town. A theory is spreading among people involved in planning that a poor way to do this is to create what someone has called "ghettos for the financially under-privileged"—in other words, housing projects for low-income families. There have been attempts to create mixed projects. One such is the proposed Gratiot-Orleans project in Detroit, which would have everything in it from tall apartment buildings to garden apartments and even single-family houses. The project may also mix races.

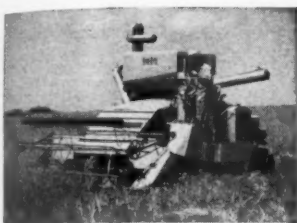
• **Outward Bound**—This would seem to imply that urban renewal may mean the packing of more people downtown in congested areas. In reality, most projects are not planned to do this. Even if they were, it is unlikely that they could reverse the trend running toward decentralization in an atomic age. One major factor working for decentralization is the pressure being put on by the government to get military production out of the big centers that would be natural targets in an atomic war.

Economic developments are also still pushing strongly toward decentralization. Where industry goes, people go, too.

• **Coexistence**—Merchants know this. They are not trying to check the vast movement of population out of downtown areas. Talbott puts his finger on the merchant's view when he asks, "Couldn't there be a peaceful and profitable coexistence between the central downtown and the suburban business area?"

Victor Gruen thinks that in reality there is no conflict between the downtowners and the decentralizers. "This conflict," he says, "is a phony." It diverts attention from the central fact, which is that the two—downtown and suburbs—are complementary parts of a whole. Both must be planned, or the

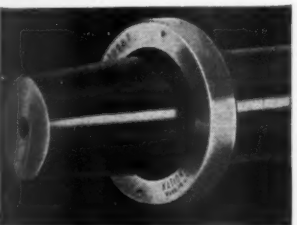
FARMING



Versatile Minneapolis-Moline Uni-Tractor becomes a self-propelled harvester, picker, husker, forage chopper or windrower. National seals are used extensively to protect engine, transmission and wheel assemblies.



Farmall Cub, International Harvester's popular light weight tractor, runs smoother, needs less servicing because of extensive use of National Oil Seals. In addition to many farm uses, tractor also doubles as power lawn mower.

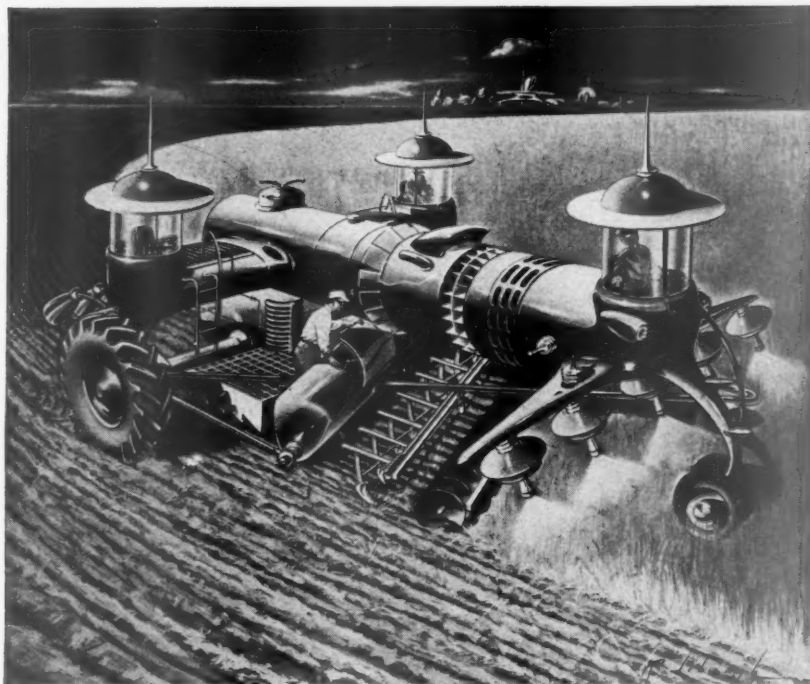


Oil seals "seal" with a steel-encased leather or synthetic rubber sealing member that fits accurately around shaft; keeps oil or grease in, dirt and water out. Fit must be perfect.

AUTO SERVICING



Automobile wheels run on ball and roller bearings too, with grease seals to retain lubricant, exclude dirt and water. For motoring safety and longer bearing life, auto makers recommend repacking front wheels with fresh grease regularly and before your vacation trip; installing new seals to keep grease clean and where it belongs.



Future implements: "everything but think"

Imagine a single machine that breaks and conditions the soil, furrows, plants, fertilizes, even applies a long-lasting insecticide. This is "once over tillage," perhaps soon a reality as farm machinery becomes still more able, versatile and automatic.

Implement designers are hard at work to make farming simpler, less time-consuming and more productive. And in addition to better performance and more varied capabilities, new implements have more dependability and longer service life. One reason for this is the increased use of oil seals to protect bearings and assemblies. Implement designers are thoroughly familiar with the job oil seals do—keeping lubricants and fluids in place, dirt and water out.

Over three decades ago National pioneered oil seals. Since then we've made millions of seals for farm implements, earth-moving and railway equipment, machinery and appliances—plus hundreds of millions for America's motor vehicle fleet. Today we can offer you over 2,500 different standard-design oil seals, or can manufacture special seals for special problems.



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3004

Take your employees out c



out of the traffic stream!

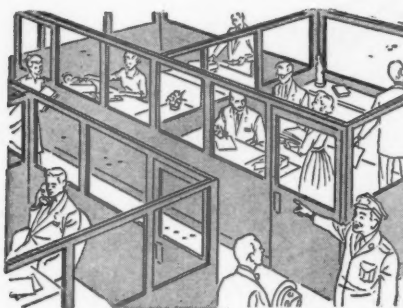
Big savings can be made in your office by installing metal, movable VMP MOBILWALLS. If you still have a crowded "open office" it gives your customers poor service and your employees a bad time. Errors. Delays. Noise. Confusion. Every day is a losing battle to get work done!

Virginia Metal Products, specialists in metal partitioning, can prove all this with *ratio-delay studies* which accurately rate office efficiency. When you analyse these reports, compare your office with those of firms who have already installed VMP MOBILWALLS and increased efficiency.

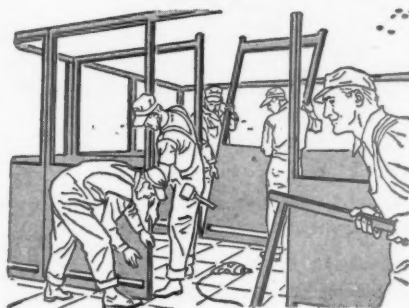
For example, the sales office of a radio-tv representative recently solved its traffic stream problem with VMP MOBILWALLS and—

- Office Productivity increased 30%
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They also mean that plants and workers can produce more in MOA; that it costs less to build and maintain here; and that there are other real savings in shipment and storage.

Yes. Mild climate works the year around in your behalf in MOA—permitting continuous operation, and sales to one of the nation's fastest-growing, richest markets—*making money by saving money for you.*

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whole retail machine will be distorted.

Gruen and other observers note that suburbia is susceptible to the same diseases and troubles that hobble the downtown area—and which spurred the move to the suburbs in the first place. Increasingly they are subject to congestion. White Plains, N. Y., one of the suburban centers outside New York City that developed early and rapidly, is now becoming uncomfortably congested. So are other suburban shopping centers, with the result that still farther-flung centers are developing around them.

III. Critical Mass

This sheds some light on the relationship between the city and the suburban center.

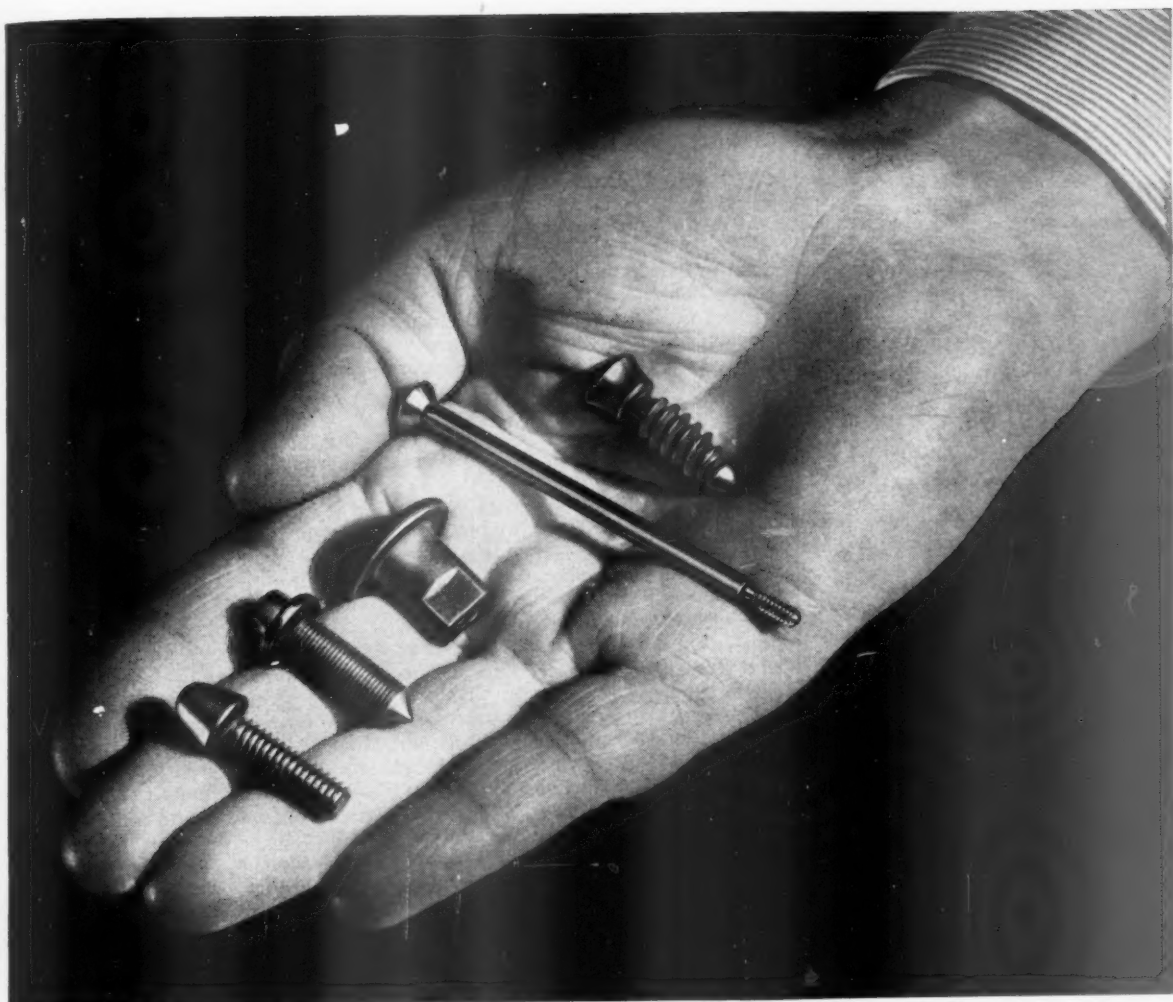
One of the problems is that the very things that make downtown what it is help to destroy it in the end—namely, people and traffic. Why do shoppers like to go downtown? The two studies, by Boston University and Ohio State, show clearly that shoppers like downtown areas because of the wide array of goods offered there, the range of sizes and colors, the range of prices. As might be expected, shoppers tend to go to their local shopping districts or centers for "convenience" items such as food, and to downtown areas for so-called "shopping" items—things such as furniture, which people like to mull over before buying. In the main, as the Boston survey showed, the more style is involved, the more the downtown area is preferred.

The Ohio State study makes a further point that another step is occurring: "Downtown facilities may increasingly serve specialized needs, and the servicing of more frequent and common needs may be in the process of transfer to peripheral areas."

• **Critical Mass**—But could such functions be carried on if the downtown rots away? Many major facilities—from big department stores and theaters to museums and amusement centers—live only on crowds. There is, as it were, a critical mass without which the big center can't exist.

From the merchant's point of view, the question is not academic. His survival depends on the city's existence as a distribution center and as a center of activity. The department store, for example, is becoming more and more a regional chain, in which a number of small units cluster around a big central store that handles warehousing, administration, and other services for them.

Says Talbott: "It is significant that the downtown store remains as the main store, the parent institution without which the branch could not long exist."



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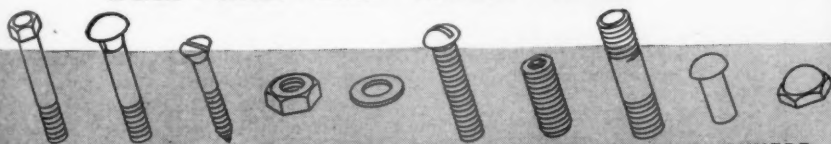
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INDUSTRIAL WORK GLOVES

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Plants in Philadelphia, Pa., and Warsaw, Ind.

Furniture: Sitting Pretty

Exhibitors at home furnishings shows in Chicago and Grand Rapids are confident of a 5% to 10% gain in business over 1954. Last year ended strong, they say.

The furniture business looks for a good year in 1955. That was the predominant note this week at the 1955 International Home Furnishings Market in Chicago and at the Grand Rapids Furniture Market. Few people expect to set the world afire this year, but most look for a 5% to 10% pickup from 1954. Last year, said Frank E. Seidman, furniture industry analyst, dollar shipments dropped 8% below 1953's.

• **Cause to Cheer**—The most specific reason cited for a conservative optimism was that retailers came to the shows with inventories in better shape than they were at this time a year ago. Furniture sales had been slow last year until the last quarter. Then, in November and December, they picked up, and inventories melted down. In January, 1954, some retailers reported warehouses loaded with enough stock to last up to 190 days; this year they were "open to buy" on merchandise for 60 day and 90-day delivery.

Further backing up the optimism are the things that have bolstered furniture hopes for several years: new home building, higher disposable income, rising birth rate. Some areas looked for benefits from longer-term mortgages and lower down payments on houses; these should leave the new homeowner with more ready cash to spend on furniture.

• **Styles Set**—Styling produced little that was new this year. In both cities, trends noted in the past few markets continued this year.

The line between modern and traditional continued to fade. Today's modern is less severe, softer, more curved; today's traditional is simpler, with cleaner lines. At Grand Rapids, touches of metal—pewter, silver, and brass—were evident, as they have been in past years. At Chicago, manufacturers seemed content to diversify lines with colors and a bigger selection of finishes, fabrics, and patterns.

Furniture makers who aim at the mass market explain this softening up like this: "Our market isn't attracted to advance design. What gets the praise from design critics rarely sells to the everyday customer. We still have to control designers and lead the public gradually to better designed merchandise. Sales volume is still done in the less-styled lines."

In appliances, some major houses went all out for color. General Electric Co. offered a "mix and match" color

scheme. Hotpoint Co., however, went slow on colored white goods. Inventory problems get tougher when you have to carry a half dozen colors in each item, a Hotpoint sales executive said. Built-in wall ranges were widely shown (page 56).

• **Prices Hold**—Prices mostly held firm. Most manufacturers felt they could gain more by putting added quality into products than by cutting prices. Thus, a range carried the same price tag as it carried last year—but it boasted a built-in rotisserie as an extra feature.

Case goods (as opposed to upholstered furniture) showed a general price increase, due to hikes in raw materials prices. Upholstered pieces that contain foam rubber were also up, for the same reason.

The biggest price cuts were in appliances, especially in home air conditioners. According to Parker Ericksen, of Avco Mfg. Corp., there are probably 690,000 air-conditioning units in the hands of factories and distributors.

• **Spreading the Line**—Perhaps the most notable development at the Chicago shows was this: a move among middle-price and upper-middle-price furniture manufacturers to bring out frankly "promotional" items to give their lines a much wider price spread. Here are some examples:

• **Barcalo Mfg. Co.** of Buffalo this year offered a reclining lounge chair for \$79.95, to sell under a different name. Its bottom price until now has been \$129.

• **Burton-Dixie Corp.**, formerly exclusively in bedding lines, introduced an inexpensive line of wrought-iron furniture, including a student's desk and chair.

• **Pullman Couch Co.** introduced a sofa bed for \$199.50 as a promotional leader; its former starting price was \$229.50.

• **Englander Co.**, mattress and spring maker, brought out two promotional items, but limited sale to a 90-day period.

This trend failed to materialize at the Grand Rapids show. Grand Rapids is the market for low-volume, high-quality producers. Most manufacturers here said they couldn't produce such items in enough volume to make such a venture worthwhile. One high-priced manufacturer who offers three price lines reported more orders in the top line than in the other two.

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It took a *hurricane* to start an avalanche to Reinforced Plastic Boats!

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▼ Twin Motor Outboard, 18 ft. — Marscot Plastics, Inc., New Bedford, Mass.



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NATION-WIDE FURNITURE MOVERS

the promotional goods. Since overhead is rising, they argued, they want items that have longer, not shorter, margins.

• **On Carpet**—The carpet industry in Chicago stirred up a spat with retailers. This industry's associations have been working with government agencies to have floor coverings included in Federal Housing Administration and Veterans Administration loans. This would boost carpet consumption from 80-million sq. yd. to at least twice that, the associations estimate.

Retailers criticized this plan, arguing that it would short-circuit local carpet dealers and give huge contracts to out-of-town outlets.

James D. Wise, president of Bigelow-Sanford Carpet Co., explained the carpet makers' concern. Right now, carpet consumption is close to 2 sq. yd. per family—up from 1½ sq. yd. before the war. But in the 1920s, per family consumption was 2½ sq. yd. "Today's figure does not represent a satisfactory sales volume," Wise said.

Georgia Court Kayoes "Fair Trade" Law Again

This week, Georgia's Supreme Court for the second time knocked the teeth out of the state "fair trade" law. The court declared in a 6-1 vote that non-signers—merchants who don't sign resale price maintenance contracts—are not bound by fixed prices.

• **Old Theme**—The case involved General Electric Co., which had sued Cox-Gardner Furniture Stores, an Atlanta furniture and appliance dealer. GE charged the store with cutting prices on small fair-traded appliances, and used the familiar argument: Price-cutting injures a manufacturer's brand name and goodwill.

This argument was the basis of the new Georgia law, passed to meet the original objections raised by the same Georgia court in 1953. At that time, the court declared illegal all price-fixing, with or without contracts—unless the business or property involved was "cloaked with the public interest."

Pro-fair-traders then moved to have the law rewritten to make protection of manufacturers' trademark rights a matter of public interest.

• **Round Two**—But this week, the court knocked the non-signer clause out, saying that a manufacturer's ownership of a trademark does not give him the right to impose prices on retailers who haven't signed a contract.

There will undoubtedly be another attempt to rewrite the law. But no one expects a new law can circumvent the court's criterion of a broad public interest.

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CORRUGATED chain reel puts profit in short lengths—cuts freight cost 1/3

Until this corrugated chain reel was introduced just recently, selling a short length of roller chain was almost more trouble to the industrial distributor than it was worth.

For every sale, he had to unwind the chain from a large wooden reel, measure it, cut it, and wrap it. This took time, consumed his profit.

Now with the corrugated reel, chain can be ordered right from the manufacturer in 25 or 50 ft. lengths. It's already wound, measured, packaged and labeled. And the lettering on the outside of the corrugated box identifies

the manufacturer until the reel is empty.

One manufacturer, after a thorough investigation, discovered that by switching from heavy wooden reels to corrugated, he cut his packaging costs 25% and his freight costs approximately a third.

Low-cost corrugated reels like this can be used for a wide variety of materials purchased in odd lengths such as cable, hose, rope, etc. When you have

something to ship or pack, take advantage of the economies in corrugated board. Your nearby boxmaker can give you prices and delivery information. He's listed in your classified directory under "Boxes—corrugated."

Langston doesn't sell corrugated, only the machines that make it. Since 1902, these machines have led the field in efficiency and dependability. *Samuel M. Langston Co., Camden 4, N. J.*

THINK FIRST OF CORRUGATED



LANGSTON

Corrugated Container Machinery

What to Do When the Kitchen



APPLIANCE MAKER'S ENTRY: Hotpoint's "Kitchen of Tomorrow-Today" has built-in appliances, push-button controls.



CABINET MAKER'S COMPROMISE: Youngstown doesn't go so far. Movable cabinets fit around conventional appliances.

Explodes

Visitors to the National Assn. of Home Builders' market show in Chicago next week are going to get an eye-ful of new and radical appliances. Business-minded visitors will also get a headache. The headache is going to come from wondering who is going to win in the revolution that is hitting the U.S. kitchen.

Here are some of the things the visitors are going to see:

- Stoves that have exploded out of their chaste enamel skins to become separate ovens and burners. There will be ovens that can be built into walls or made to nestle on top of kitchen counters. There will be countertop burners (made by Frigidaire) that fold up against the wall out of the way.

- Refrigerators that have been split up into separate freezer and storage units to be hung on or built into the walls, at chest height.

- A medley of new refinements, including electrically operated lazy-susans, refrigerators that automatically dispense different flavors of soft drinks.

- Color in everything. Not only will there be plenty of color in the appliances, but in the kitchen cabinets as well. The biggest news here will be supplied by Youngstown Steel Kitchens, a division of Mullins Mfg. Corp. Youngstown, which the industry estimates has some 40% to 50% of the steel kitchen business in the country (\$180-million or so at retail), has capitulated to the color trend by bringing out kitchen cabinets in three colors.

What visitors will see is the kitchen in transition. There is no clear indication as yet what direction the change is going to take or who is going to have the dominant role in manufacturing and distribution. The situation somewhat resembles that when two new speeds broke upon the phonograph record industry a few years back, except that the problem in the kitchen industry is far more complex.

I. The Possibilities

The problem arose when appliances came out of their enamel packages (BW-Nov.20'54,p31). Up until then, planning the kitchen was largely a matter of building shelves and cabinets around white boxes. Now, a number of possibilities have opened up. In a sense, some of the changes are largely matters of language; others are more real. Here, roughly, is the way they divide up:

Built-ins. This is the idea that Hot-point (top picture) and other appliance manufacturers now have. In general,



"You see Powell Valves everywhere! The reason is . . .

. . . easy to understand. Engineers specify Powell Valves because they're dependable. Economical, too. And Powell has a complete line of valves."

Known since 1846 for dependability

When you think of valves, think of Powell. Powell can supply just the valve you need, for Powell probably makes more kinds of valves and has solved more valve problems than any other organization in the world.

Available through distributors in principal cities. Made 1/8" to 30" and for 125 pounds to 2500 pounds W.S.P. Bronze, iron, steel and corrosion resistant metals and alloys. On problems, write direct to The Wm. Powell Company, Cincinnati 22, Ohio.



THE COMPLETE QUALITY LINE

Powell Valves

109th YEAR

plant-location news



Get facts on water ... fast and free

You should see the letters we get from businessmen who received water data from our Industrial Location Service. These executives say they never got so much comprehensive, up-to-the-minute information so fast. Or information that was more helpful in choosing the *right* plant site.

One reason we can supply just this kind of authoritative material is the *way* ILS specialists work. They collect and analyse facts from a variety of sources to meet the specific needs of each client.

Water, water everywhere...

I remember one ILS water report prepared for a large producer of industrial chemicals. It ran over 25 pages with maps and diagrams and aerial photos—and covered just about everything.

It pinpointed surface-water supplies of the correct quantity and temperature range. And a chemical analysis checked on quality. Not just total hardness and pH, but quantities of silica, iron, molybdenum, calcium, magnesium, and other elements had been measured.

But in case surface water wasn't enough for this chemical company, ILS went *below* ground in selected areas. They surveyed water-table records, logs and production capacity of local wells, and made the *same* chemical analysis as they did for surface supplies.

All this detailed information was in the final report, along with a number of suggested locations having just the right water sources. And like all ILS reports, this one was prepared free of charge.

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Water won't be your only concern when you're looking for a new plant location. But no matter what factors are involved, ILS can help. Reports are available on transportation, markets, raw materials, labor, buildings or sites, and local laws and regulations—to mention just a few. These surveys are tailored to meet your needs, and sent to you without cost or obligation.

Our booklet called "Industrial Location Services" shows how you can put this valuable plant-location data to work. To get your free copy, write me at the New York State Department of Commerce, Room 707, 112 State St., Albany 7, N. Y.

Ronald B. Liberman

Director, Industrial Location Service

they make appliances that will fit into walls, under sinks, or in cabinets.

Stack-ons. This is a phrase invented in opposition to the appliance makers by the kitchen cabinet makers. Youngstown uses the phrase to describe its own "compromise" kitchen (bottom picture). Here, the idea is to create standardized shelving and cabinets on which and into which you can put today's exploded appliances.

Modular kitchens. These haven't appeared yet, but they may soon. General Electric has talked about them. The idea is to build complementary kitchen units that, much like sectional furniture, can be moved around to suit the shape of a room or the artistic sensibilities of the housewife. Appliances would come built into free-standing cabinets, which could be combined to make a complete kitchen.

Portable units. These might be combined with any of the other three ideas. For example, you could have a range unit in a drawer that could be taken out for outdoor cooking.

• Confusion—The field, in short, is wide open. The possibilities and possible combinations go on nearly ad infinitum. General Electric, for example, which already makes not only appliances but kitchen cabinets and shelving, plus its own counter tops (Textolite and Monotop), could move into the packaged kitchen business in a big way. The cabinet makers could tie up with appliance makers to offer a kitchen package.

Meanwhile, confusion is the order of the day. On one hand there is the threat to cabinet makers that appliance makers will turn out all shapes and sizes of units, for which a huge number of cabinets will have to be designed. On the other hand, the appliance makers run the risk of having their equipment—and carefully nurtured brand identification—disappear into someone else's cabinets.

At the same time there is the problem of who will sell the new kitchens—building contractors (who handle the bulk of built-in appliances today), regular appliance dealers, kitchen specialty shops, plumbing shops, or lumber yards?

II. Youngstown's Position

The kitchen of the future is still a long way off. No one knows what it will be like. In the meantime, there are quandaries that can break a company. The cost of retooling, for example, is huge, either for new types of appliances or for steel cabinets and shelving. Then there is color. It means an inventory problem at the dealer level, plus increased cost of manufacture.

Youngstown's dilemma in regard to both these problems sheds some light on the difficulties of an industry in transition. As the biggest factor in the kitchen cabinet field, Youngstown—with the greatest amount at stake—dragged its feet on color, just as General Electric for a long time scorned color in its appliances.

Youngstown believed—and still believes—that white, moveable appliances are best for the kitchen. Its own consumer research shows, it says, that housewives prefer the standard models—though it runs counter to appliance maker's research. Built-ins are as yet impractical from the standpoint of insulation, safety, and space, Youngstown insists. Besides, the built-ins cost too much—both to builders and consumers.

• Compromise—But even Youngstown felt the impact of the new trend. For a while it tried compromising by designing kitchens with enough color in curtains and floor tiles to take away whatever curse there was in white enamel appliances. But the competition began to use color, and the consumer put on pressure. So Youngstown finally gave in.

The problem was to avoid getting too many colors, yet at the same time to avoid neutral colors without any oomph to them. It adopted a "common-sense" approach, got an artist from the stable of American Associated Artists to develop colors that would be "positive yet neutral enough to blend in with any combination of color and white." It thinks it achieved this with "dawn yellow," "meridian blue," and "sunset copper."

Youngstown has made other changes, too. Its dishwasher now opens at the front—like others—instead of on the top. It has a new garbage disposer. And it is offering Formica counter-tops with wooden chopping blocks cut into them.

• Package—As a cabinet-maker, Youngstown is banking on the idea of a completely packaged kitchen, planned and tailored to individual needs. This is hardly a brand-new idea. Indeed, it dates back to the 1920s at least; Mullins itself got into the kitchen business with "unitized" kitchens in the late 1930s. Here is what unitized means to Youngstown:

The basic component is naturally the steel cabinet. Whether a wall or a base unit, the cabinet can be adapted to the new decentralized appliance units. As a part of its compromise with the kitchen of the future, Youngstown recommends stack-ons rather than built-ins. In other words, place a separate oven unit on top of a counter, under a specially built and insulated cabinet.

• Distribution—Who is going to sell the new kitchens? This is a king-size



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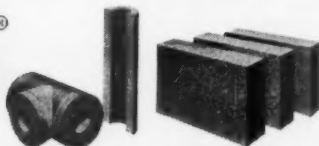
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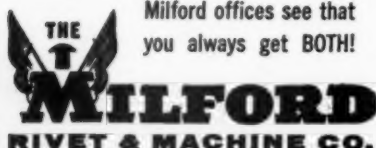
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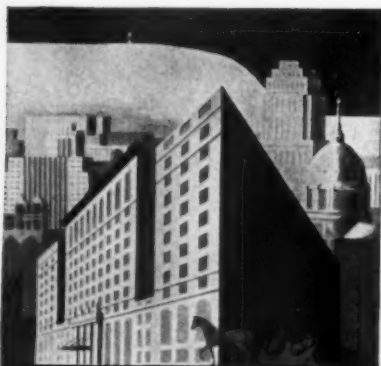


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marketing headache. Youngstown has this shot-gun scattering of outlets: building contractors (who do 40%-45% of its business), regular appliance dealers, kitchen specialty shops that sell nothing but Youngstown kitchens, the new type of retail plumbing shops and lumber yards (Youngstown says some of these are the most aggressive sellers), and the do-it-yourself stores that are springing up at a fast clip (Youngstown now has a booklet out on how to build your own complete kitchen). Several of these outlets are in natural competitive conflict with each other.

Youngstown, which is putting \$2-

million into advertising and promotion this year, expects plenty of competition. For one thing, steel accounts for only about 25% to 35% of all cabinet business, and the makers of wood cabinets are aggressive and hopeful. Then there are competitors such as Avco Mfg. Corp., maker of American Kitchens, which recently came up with cabinets that have interchangeable wood and metal paneling. Sears, Roebuck, another big factor in the field, also sells tailored kitchens in wood or steel. And looming somewhere in the future is the threat posed by the appliance makers in the form of modular units.

Kodak Fair Trade O.K.'d

Federal Trade Commission drops its old charges that the film maker acted as a retailer in fixing prices with independent retail outlets . . . Allied plans new \$300-million chain of suburban shopping centers . . . Norge offers dealers new profit-sharing plan.

A manufacturer may sign "fair trade" minimum pricing contracts with independent retail customers, even though its own company-owned retail outlets compete in the same marketing areas.

This key ruling was handed down by the Federal Trade Commission this week, putting an end to its long, drawn-out fair trade case against Eastman Kodak Co. Back in 1952, the old Democratic-controlled FTC legal staff charged that Eastman—because it owned competing retail outlets—acted as a retailer in signing fair trade contracts with other independent retail customers to set minimum prices on film and photographic supplies. This, FTC lawyers argued, constituted illegal horizontal price fixing—between retailers—in violation of the antitrust laws.

After more than two years of pulling and hauling among its own members, the full commission unanimously dismissed the Eastman case on the grounds that the company had acted as a manufacturer. FTC held that the Eastman contracts were vertical price setting—between manufacturer and retailer—a practice that is exempted from the antitrust price-fixing bans by the fair trade laws.

No more free alterations. That's the policy adopted for the first time by a men's clothing chain in New York City. Department stores traditionally charge for alterations, but the specialty stores haven't been doing it. Now Crawford Clothes, Inc., says it will—though the charge will be less than the department

stores usually make. At the same time Crawford cut the prices on its suits. Crawford describes it as a move toward a discount-house operation.

The biggest network of one-stop suburban shopping centers in the U.S. is being planned by the Allied Stores Corp. department store chain.

The network includes seven new centers, in addition to three already in operation. The 10 centers represent an investment of nearly \$300-million. Allied itself will finance some of the regional centers, will be the principal tenant in those sponsored by local investors.

Biggest center will be Bergen Mall, in northern New Jersey, seven miles from New York City. Serving as a model for the other centers, Bergen Mall will sprawl over 100 acres, housing more than 100 different retail stores, banks, restaurants, office buildings, a public auditorium, an ice skating rink, a children's playland, and an 8,600-car parking lot. Allied expects it to rake in an average of \$2-million a week in retail business from the rich North Jersey market area—which has an annual income of \$2.7-billion.

The other centers being planned will go up in the areas of Boston, Houston, Cincinnati, Long Island, Levittown, Pa., and Minneapolis. The three centers already completed are Seattle's Northgate, Miracle Mile at Rochester, Minn., and Shoppers' World in Framingham, Mass.

Allied, the biggest of the department store chains (\$528-million volume in

1954), has thus put a new impetus behind the suburban trend in retailing—the movement that has presented the merchants of the country with their No. 1 problem today (page 42). However, Allied is not forgetting the downtown. It also announced that it is putting \$20-million into improvements and expansion of its downtown stores (it has 72 all told).

Shopping Centers Institute of America has been organized by a group of suburban centers, builders, and ad men in Illinois. A nonprofit organization, its aims are to establish standards of business ethics, to foster discussion of mutual problems, and to promote both individual stores and the shopping center idea as a whole. First president is Albert S. Hecht, Jr., of the Park Forest (Ill.) center.

Norge Div. of Borg-Warner Corp. is

Paper Napkins Branch Out

Hudson Pulp & Paper, long the proponent of the better grades, is preparing to launch an invasion into the toilet and facial tissue markets.

Hudson Pulp & Paper Corp. is a company that, so far as the consumer goes, has a name in just one product. In paper napkins, it's the No. 1 concern in the market. Now it is out to compete with the giants in other lines: Scott Paper Co. in toilet tissue and paper towels; International Cellulose Products Co.'s Kleenex in facial tissues.

This week Hudson officials told of its new marketing strategy. It is backing up its shift to a multiproduct merchandiser with a new management alignment—and with a \$15-million expansion of its paper mill at Palatka, Fla. This expansion will come close to doubling Hudson's capacity by 1957, and the bulk of the mill's output will go into consumer products.

Right now, household products account for only some 30% of Hudson's total \$43-million-odd sales. The major business is in paper bags and similar kraft products, multiwall bags, and gummed tape. When the new mill is going full blast and the new marketing policy gets up steam, Hudson's output will split about 50-50 between household and commercial production.

• **Hudson's Weapon**—Hudson knows that as it moves deeper into the consumer field it will face tough competition. In wooing the household market, the company is following a major trend in the many-faceted paper business. While Hudson was concentrating on

going to give its dealers an extra discount.

The plan works like this: For every Norge appliance that a dealer buys from an authorized distributor before June 30, 1955, the manufacturer will put 2% of the purchase price away for the dealer. After June 30, the rebate will be delivered to the dealer in a lump check.

Norge says the 2% will be beyond the dealers' regular discounts, which will not be lowered. The company feels it can afford what it calls its "bold, revolutionary, \$2-million move" on the strength of having doubled its 1953 sales volume in 1954, and counting on tripling it in 1955. The dealer rebate plan is intended to increase dealers' slipping profits as well as to boost sales.

A deeper underlying reason for the move may be the inroads the discount houses have made in the appliance field. The 2% bonus will give Norge dealers who hold the price line a better break in their fight against price-cutters.

its paper napkin, other producers were digging deep in the growing market for other paper products.

Hudson banks on quality as its chief competitive weapon. The company says it has from 70% to 85% of the napkin market in those areas—mainly east of the Mississippi—where it sells. "We got there," says William Mazer, who this week graduated from executive vice-president to president, "because when we started there was a vacuum in quality paper napkins." There is no such vacuum today in quality facial tissues, toilet tissues, or towels. But Hudson still counts on quality to win acceptance for Hudson towels and tissues. More than ever the housewife is quality conscious, and willing to pay for it.

• **The Market**—Actually, the housewife buys only about 10% of the total value of converted paper products. But her kind of market has some special appeals. She is a block on which to build a demand for a specific product and a specific brand. To her, a paper bag is just something to tote her purchases in, and she doesn't care how cheap a product it is. But when it comes to toilet or facial tissues, she has her favorites—and is willing to pay a cent or so more to get her brand.

From the manufacturer's point of view, this is all to the good. Ton for ton, dollar profit is higher the more the

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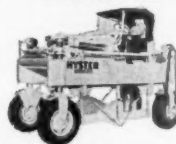


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goods are finished. And the demand for consumer products is steadier, an important consideration in a business where capital investment is high and the mills have to keep rolling to be profitable.

The consumer has some other strong points in her favor right now. She is thoroughly paper-minded; facial tissues are practically a household necessity. Paper napkins, says Mazer, got their big boost during the war when textiles were short, servants shorter, and laundry services high.

Paper towels are taking hold in the household, too; primary production of household towel stock increased about 34%, between 1949 and 1953, according to Tissue Assn.

No manufacturer thinks that either the consumer market or the consumer product potential has anywhere nearly reached its limit. American Cyanamid's work in developing a resin-treated paper (BW-Jun.20'53,p148) suggests possibilities in such items as paper bathing suits. Paper cup manufacturers look to the day when bars will serve drinks in paper. And, says Mazer, "The day isn't far off when we'll have paper table cloths, paper sheets and pillowcases."

• **Upgrading**—Hudson, in fact, has been marketing towels and toilet tissues for years—but without benefit of any promoting. To improve its toilet tissues, it increased pulp specifications, added a special "bacteriostatic" treatment to make the paper less alkaline. It increased the basis weight, wet strength, and absorbency of its rejuvenated towel line. In paper napkins, it brought out a new satin-finish, two-ply product to add to its single-ply standard and two-ply soft napkin. Finally, to round out its consumer line, it revived a product it had dropped: the Hudson Hankie. This is a two-ply facial tissue, packaged in a square box, and dressed up with an embossed "lacy" border. It revamped its entire package design to give a look of prestige. Final flourish was to add a cent or so to the price.

Mazer believes that the two-ply product has the big appeal in today's market. Tissue Assn. figures seem to bear him out. Primary production of regular toilet tissue stock, for example, grew some 15% from 1949 to 1953; the facial type, or two-ply, toilet tissue stock jumped some 78%.

Two-ply lines have a special beauty, at least to the manufacturer. Their prices in toilet tissue run a penny or so higher at retail for 1,000 sheets against 1,000 sheets of single ply. But in the two-ply, the sheets are doubled, so that for practical purposes the consumer is buying 500 instead of 1,000. In other words, she uses up the product faster. It doesn't take so much paper to make the 500 double sheets as the 1,000

single sheets, either, because the two-ply sheets are lighter than the one-ply. This quality of fast disappearance endears the two-ply not only to the manufacturer but to the retailer.

• **Bellwethers**—Once again, in pursuing quality Hudson is following the industry pattern. Scott Paper Co. perhaps set the pace on this trend. It has prided itself for years on a steady job of raising quality and at the same time, in some cases, lowering price. Thus its ScotTissue, the No. 1 toilet tissue, is a vastly improved product from its early days; but its retail price now of around two rolls for 25¢ is just half what it was in the 1920s.

Scott has continued to put stress on the quality market. It brought out its Soft-Weve two-ply toilet tissue during the war. Its Scotties, a facial tissue, recently got a new treatment to give them greater wet strength. The company is especially proud of its Scotkins, a satin-finish, two-ply napkin it started to market two years ago. Scott officials believe it was this napkin that prodded Hudson into its new satin-finish line.

Other companies are both broadening consumer lines and upgrading. International Cellucotton is test-marketing a two-ply napkin called Veldown, to add to its Kleenex and its two-ply Delsey toilet tissue. A year ago, Marathon Corp. bought Northern Paper Mills as a way into a broader household market (BW—Jan. 30 '54, p148).

• **Hedge**—In all the rush to upgrade, the industry has not lost sight of the fact that economy is one of its product's great assets. Basically, paper is a mass market item, a Scott official says. So in its lower-priced lines—which are generally still the biggest sellers—the industry is hedging against a day when price may be the big sales factor.

The economy argument works in industrial products, too, where paper generally is the lowest-priced wrapping material. The industry acknowledges that the synthetics have made some inroads on the paper field. But Mazer isn't worried. "You package something in polyethylene," he comments, "and then you have to protect the polyethylene with paper."

• **The Team**—The new Hudson campaign calls for a lot of merchandising, heavy promotion outlay, and the rest of the fanfare that go into a competitive battle. To further underscore the importance of the drive, Hudson elevated Irwin Zuckerman, former sales manager, to vice-president in charge of the consumer division. Until 1954, the company had had no completely separate consumer sales force. Raymond Hatch, director of research and development, also acquired a vice-presidential tag. And Jacob Mazer, former president, moved up to become chairman of the board.



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You're looking at Bankhead Highway (U.S. 78), an old concrete road in Fulton County, Ga. This road, built in 1916, has served taxpayers in the area with amazing economy ever since.

Since 1916 Bankhead Highway has carried more and more traffic, heavier and heavier loads. The average daily traffic on this section now is 7000 vehicles—1/3 of them commercial.

Traffic loads like this are far more than the pavement was designed to bear. And the service life has been longer than was expected. By modern standards this road is inadequate. Yet it goes right on carrying this extra traffic with very little maintenance expense, while other types of pavement have been rebuilt or resurfaced many times.

Hundreds of miles of concrete roads built decades ago match the performance of Bankhead Highway. They long ago earned their cost and keep in the gas taxes and license fees that motorists pay to use them—and they're not through earning yet!

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SCIENTISTS IN BUSINESS, Dr. Dean Wooldridge (left) and Dr. Simon Ramo, watch new labs built as their company brings . . .

Ivory Towers Down to Earth

Fifteen months ago, Dr. Dean E. Wooldridge and Dr. Simon Ramo (picture) opened their doors in Los Angeles as an electronics research and development service. Ever since then, Ramo-Wooldridge Corp. (BW-Sep. 26'53,p126) has been expanding faster than new space could be built or rented.

This month, the first half of a new 150,000-sq. ft. building will be completed, but not soon enough to ease the jam. Ramo-Wooldridge has 200 employees, including 75 scientists, quartered in five offices, including a former church and parochial school. By year-end, the company expects to have 500 employees; in five years, about 2,000.

That's fast growth even in a phenomenal industry—the Los Angeles electronics business that has grown in 13 years from zero to 61,000 employees and nearly \$1-billion of annual sales.

• **Not Much to Show**—In the 15 months, Wooldridge and Ramo (president and executive vice-president respectively, though their names are

reversed in the corporate title for the sake of euphony) have spent \$5-million put up by Thompson Products, Inc., owner of a 49% stock interest.

For their staff, they have recruited dozens of top scientists when everyone else is screaming for them—R-W's lure was a free hand in research and a voice in the company, as well as good salaries. The company has already set up a wholly owned subsidiary.

To show for all this, Ramo-Wooldridge has so far produced nothing but ideas. The manufacturing subsidiary, Pacific Semiconductors, Inc., won't have any of its products (BW-Aug. 28 '54,p88), on the market before next month. So far, R-W itself performs only research and development service.

Sale of such service runs into big money, though. Ramo and Wooldridge have contracts for developing and designing military electronics systems, such as guided missiles, radar, and aircraft gunfire control, as well as some commercial projects. In systems engineering alone—their strongest interest

—they have a \$10-million backlog of orders.

• **Systems Engineering**—The shiny new science of systems engineering (page 164) is the art of hooking up wondrous electronic devices to do even more wondrous things. For example, in their former posts as directors of the electronics research lab at Hughes Aircraft Co., Ramo and Wooldridge put together a search radar, a gunsight, and a computer to make an all-weather gunfire control for jet fighter planes.

Now they're working on another problem: how to land planes of all types at airports in any kind of weather, at half-minute intervals, without stacking them for minutes or hours in a holding pattern. This, too, calls for radar and computers, and it also demands electronic equipment for flight scheduling, routing planes, forecasting weather, directing navigation, communications.

• **Scientists' Eden**—All this is much trickier than just adding tubes to a television set. It calls for giving

knowledgeable scientists a free rein, with encouragement to think big. The scientists must boldly decide what components they'll need for such systems, perhaps even before development has started on these components.

They must know broadly what's new and what's practical in the electronics field. They must be able to make the components work together, with no function overlapping or duplicating another.

That's why scientists rule the roost at Ramo-Wooldridge, as executives as well as technicians. Practically every key post is filled by an engineer or a physicist.

I. Californian Specialty

In its youthfulness and its orientation to science, Ramo-Wooldridge is typical of the electronics companies that have sprung up in the Los Angeles area since the start of World War II. Only a small part of this industry is devoted to such standard products as radios and television sets; most is involved in the pushbutton worlds—military and commercial—that are yet to be born.

• **Three Markets**—For convenience, you can divide the electronics industry into three main markets:

Household. Nationally, this accounts for 30% of the value of end products. In the market for radios and TV receivers, Southern California doesn't compete much—it's too far from the mass of buyers.

Military. This amounts to about 60% of total business, and since the war it has been growing. Its close ties to the aircraft business, which is strong in Southern California, have helped encourage the industry in Los Angeles.

Commercial-industrial. This bracket accounts for 10% of total business. It includes computers, electronic process control equipment, instruments, all kinds of automation. It is growing so fast that many people predict it will top the household branch of electronics in a few years. Los Angeles is strong in this development, too.

Over-all, Los Angeles and Orange counties today account for 12.5% of total dollar volume in the electronics industry. At the end of World War II, they had scarcely 1%.

• **Riding High**—In the past two years, the electronics industry in Los Angeles has topped the aircraft industry in terms of capital investment. In 1953, it invested \$26.5-million, compared with only \$4.6-million a year earlier. And its total sales volume of more than \$800-million is edging close to that of the construction industry.

The industry is made up of 415 companies in the Los Angeles metropolitan area, half of which have fewer than 50 employees. Only 7% have 500 or more employees. Of the 374 companies engaged in manufacturing electronics products or components, 161 are active in research and development.

• **Why Los Angeles?**—Two factors have been primarily responsible for drawing electronics companies to Southern California:

• Supply of manpower and brainpower is continually replenished by in-migration of people attracted by the climate, and by the graduates of such schools as California Institute of Technology, which stresses training of engineers in advanced physics.

• Development of military and commercial aircraft and of guided missiles is largely centered in the area.

The industry got its start in 1941 when H. L. Hoffman, president of Hoffman Electronics Corp. (formerly Hoffman Radio Corp.), organized the West Coast Electronics Manufacturers Assn. to get wartime contracts for the area. It was spurred in 1948 when Hughes Aircraft started rounding up a brilliant array of physicists, including Drs. Ramo and Wooldridge.

II. On Their Way

In 1948, Ramo and Wooldridge headed the Hughes electronics lab. Both had done graduate work at Cal Tech, had then gone on to 10 years of advanced electronics work—Wooldridge at Bell Labs, Ramo at General Electric. Backed by a new team of managers, they talked Howard Hughes into taking up electronics manufacturing.

Armed with the Hughes purse, they started a nationwide recruiting drive for engineers and physicists to develop the fighter plane fire control and other military electronic devices. Hughes got a lot of defense business, which helped in five years to boost sales to \$200-million a year. Then came the big management walkout at Hughes in the fall of 1953 (BW-Oct. 3 '53, p61), when Ramo and Wooldridge also left to form their own company. They took several Hughes people with them.

• **Finding an Angel**—With their reputation and their following, the two men were able to form their company on the best conditions. They got liberal financial backing from Thompson Products, with whom they had done business. Thompson was interested in getting into electronics research and agreed to put up working capital in return for 49% of the stock and only three seats on the seven-man board of directors.

Neither Ramo nor Wooldridge was



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keen on the title or the administrative responsibilities of president, but they talked it over and decided that Wooldridge could tolerate them more readily than Ramo.

The only officers without a formal scientific background are Gen. Harold L. George, senior vice-president, former general manager of Hughes Aircraft, and V. G. Nielsen, controller and director of administration, former director of administration at Hughes.

• **Science Prevails**—Ramo and Wooldridge say that a predominance of scientists is just what their work needs. They hasten to add that their men aren't all tenants of ivory towers—many have had considerable administrative experience. For example:

• Dr. Ralph P. Johnson, vice-president for research and development, formerly held a similar post at Hughes and before that was deputy director of research for the Atomic Energy Commission.

• Dr. Louis G. Dunn, associate director of the Guided Missile Research Div., formerly directed the Jet Propulsion Laboratory at Cal Tech.

• Dr. James C. Fletcher, director of the guidance and control staff of the same division, headed theory and analysis on the Falcon missile at Hughes.

• Dr. Milton U. Clauser, director of the aeronautics and structures staff of the guided missiles division, formerly headed the School of Aeronautics at Purdue University.

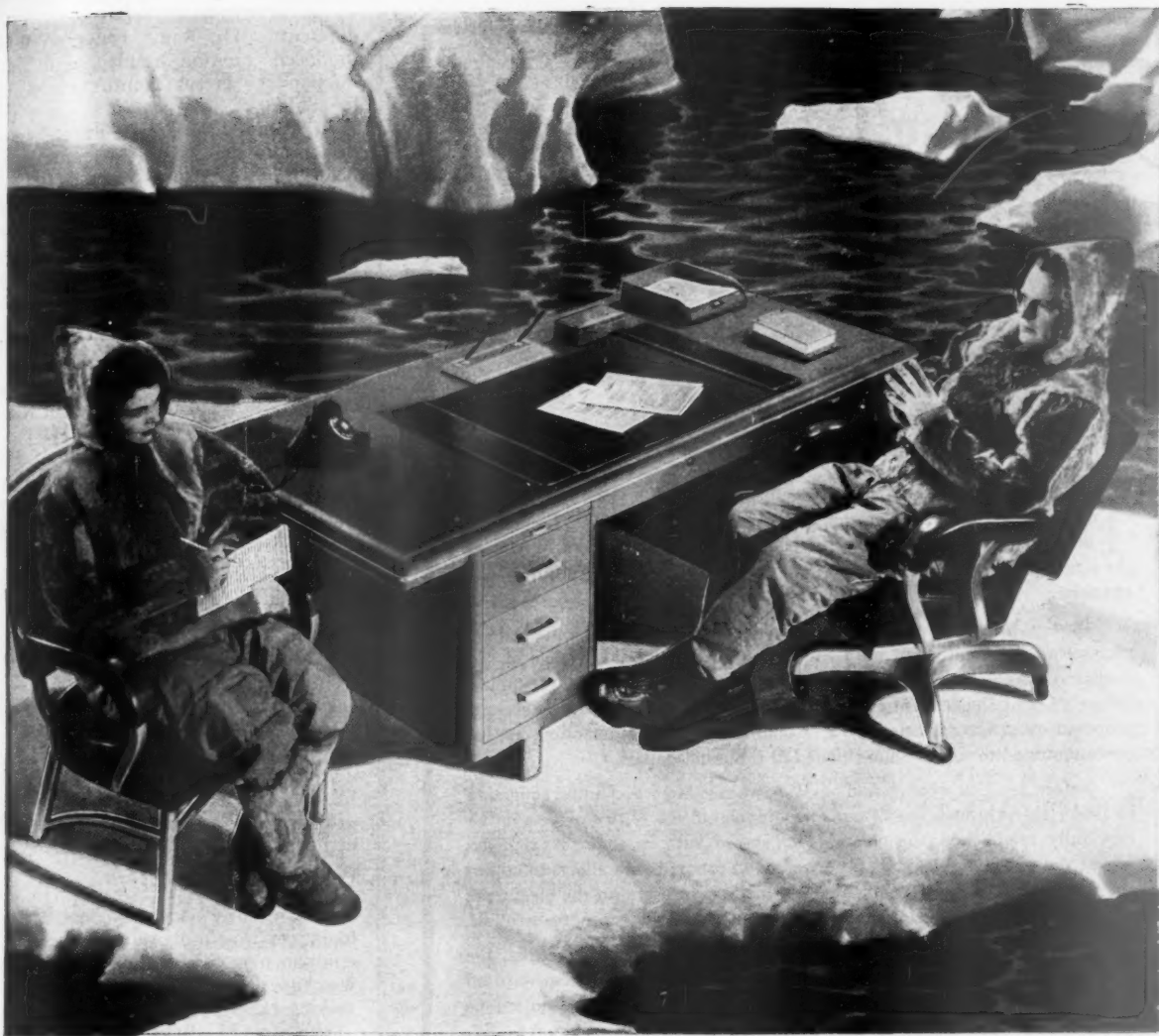
Besides being naturally sympathetic toward fellow scientists, Ramo and Wooldridge see practical advantages in giving them responsibility. Says Ramo:

"When you are working with almost magical devices, the quality and reliability of your product are of utmost importance. If you are clever with your basic understanding of everything that goes into the product—materials, alloys, refining, electrical characteristics—and your machines, you can get high quality at little or no extra cost. The way to do it is to give a team of scientists the responsibility."

III. Worlds to Conquer

Selling services and brainpower will be Ramo-Wooldridge's stock in trade for several years, but the company will move by degrees into manufacturing. "So much cost," says Wooldridge, "arises out of the complex interrelationships of engineering and manufacturing of electronic systems that it is hard to separate engineering and production. The man who understands the product must build it."

Last summer, R-W set up Pacific Semiconductors, Inc., to make electronic components—semiconductors that are in the same general family as transistors but are designed and constructed

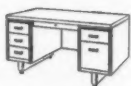


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differently. Dr. Ramo says tests have produced exciting results, and production is several months ahead of schedule.

• **In Commercial Fields**—Ramo-Wooldridge also has its eye on commercial fields. The company is already staffed for two of them: (1) development of computers and business data systems and (2) development of communication systems. So far, R-W is only designing systems and making recommendations for using machines made by other companies. Eventually, though, it may manufacture some sub-systems.

The more Ramo and Wooldridge studied business applications of electronics, the surer they were that business operations are more complicated than most engineers realize. So they decided to approach the problem by putting the scientist first to learning the businessman's needs. They organized an operations research department (BW—Nov. 13'54, p104).

IV. Others Move In

If Ramo-Wooldridge grows this year according to schedule, it will be among the top 10% of employers in the Los Angeles electronics industry by 1956. The roster of the smaller shops isn't likely to stay unchanged, though. Many of these shops are tying up with national companies; others are being set up by such concerns.

Elgin National Watch Co., for example, recently bought Neomatic, Inc., maker of tiny miniaturized electronics components. Elgin thought the step was logical for a company with watch-making experience.

William M. Brandes, Elgin's vice-president in charge of manufacturing, says there are far more big Eastern companies looking for small electronics companies to buy than there are electronics companies willing to sell. His observation is confirmed by that of E. P. Gertsch, president of West Coast Electronics Manufacturers Assn., who says there has been a parade of would-be buyers around his own company, Gertsch Products, Inc. What's more, he says, they are ready to pay entirely in cash.

• **New Branches, Too**—Another trend is seen in the number of Los Angeles companies that have created electronics divisions. They include:

- Ralph M. Parsons Co., specialists in building refineries.
- Hufford Machine Works, makers of gigantic stretch presses.
- Thermador Mfg. Co., makers of electric ranges for kitchens.
- United Geophysical Co., consultants in geophysical and geological surveys to find oil.
- Byron Jackson Co., a 78-year-old manufacturer of pumps.

Now Puerto Rico Offers 100% Tax Exemption to New Industry

by BEARDSLEY RUMI

"We don't want runaway industry" says Governor Muñoz. "But we do want new and expanding industries. To get them, we promise freedom from all taxes—local and Federal." That's one reason why hundreds of U. S. manufacturers are locating new plants in Puerto Rico, where they are protected by all the guarantees of the U. S. Constitution.



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IN A dramatic bid to raise the standard of living in Puerto Rico, the Commonwealth Government is now offering U. S. manufacturers such overwhelming incentives that more than three hundred new factories have already been established in this sun-drenched island 961 miles off the Florida coast.

First and most compelling incentive is a completely tax-free period of ten years for most manufacturers who set up new plants in Puerto Rico.

For example, if your company is now making a net profit after taxes of \$53,500, your net profit in Puerto Rico would be \$100,000—a gain of 87 per cent as a result of non-applicability of U. S. Corporate Income Tax in Puerto Rico.

Your dividends in Puerto Rico from a corporation there could be \$50,000 against \$25,000 net in the U. S.—thanks to the non-applicability of the U. S. Income Tax.

What About Labor?

Puerto Rico's labor reservoir of 650,000 men and women has developed remarkable levels of productivity and efficiency—thanks, in part, to the Commonwealth's vocational training schools. These schools also offer special courses for managers and supervisors.

The progress made in technical skills may be gauged from the fact that there are now twenty-eight factories producing delicate electronic equipment.

Among the U. S. companies that have already set up manufacturing operations in Puerto Rico are Sylvania Electric, Carborundum Company, St. Regis Paper, Remington Rand, Univis Lens, Shoe Cor-

CORPORATE TAX EXEMPTION	
If your net profit after U. S. Corporate Income Tax is:	Your net profit in Puerto Rico would be:
\$ 17,500	\$ 25,000
29,500	50,000
53,500	100,000
245,500	500,000
485,500	1,000,000

DIVIDEND TAX EXEMPTION	
If your income* after U. S. Individual Income Tax is:	Your net income in Puerto Rico would be:
\$ 3,900	\$ 5,000
7,360	10,000
10,270	15,000
14,850	25,000
23,180	50,000
32,680	100,000
43,180	200,000
70,180	500,000

*These examples are figured for dividends paid in Puerto Rico to a single resident. Based on Federal rates effective Jan. 1, 1954.

poration of America, and Weston Electric.

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Mr. Christensen might have added that the climate is magnificent, with temperatures in the 70's twelve months a year.

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screen job applicants for you—and then train them to operate your machines.

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Light-weight articles such as radar components come off the line in Puerto Rico one day and are delivered by air freight next day in California, Chicago and other mainland cities. And, of course, there is no duty of any kind on trade with the mainland.

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The Commonwealth is interested in attracting all suitable industries, and especially electronics, men's and women's apparel, knitwear, shoes and leather, plastics, optical products, costume jewelry, small electrical appliances, hard candy and pharmaceuticals.

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Tufted Textiles Take the Floor

About five years ago, Eugene T. Barwick quit a good job as one of the top rug buyers for Sears, Roebuck & Co. to launch his own rug making business. He had less than \$5,000 capital, and his first mill consisted of one superannuated tufting machine in an old grocery store in the back-country town of Chatsworth, Ga.

Barwick didn't know how to make rugs, but he knew how to sell them. And he had some pretty good ideas about what the rug-buying public wanted.

"It didn't take genius to figure out after the war that tufted textiles were the coming thing in floor coverings," 41-year-old Barwick says. "They offer more in color, styling, and materials. Besides, you can turn out as good or better product a lot faster and cheaper by using the tufted process than you can get on the most up-to-date looms now available."

Barwick's lack of genius turned out to be no real handicap. Today, Bar-

wick Mills claims that it turns out about one-quarter of all the tufted floor coverings made in the U.S. When the 1954 figures are all in, the company sales will total about \$26-million—nearly \$4-million ahead of 1953. That's no mean feat, considering that 1954 saw rug makers closing plant after plant.

• **Promotion**—There was more than timing involved, however, in Barwick's promotion of his small capital into a multimillion-dollar business.

Back in 1949, when he decided to take the plunge, the tufted textile industry barely made an imprint in the rug business. Its chief products were bath sets and inexpensive scatter rugs that had a tendency to skid. But Barwick—with an eye on the housing boom—saw a big potential market among average homeowners who couldn't afford wall-to-wall carpeting in the conventional woven fabrics.

• **Old Art**—The tufting process itself actually is an outgrowth of the old homecraft chenille industry that cen-

tered in Georgia's upper Piedmont region. The modernized method is relatively simple. You build a machine big enough and wide enough to accommodate the width of carpeting you want to make (Barwick machines are up to 18 ft. wide). Across the width of the machine, you put up to 1,500 needles in a line, each threaded and connected to its own spool of yarn. These needles puncture the back of the retainer cloth—usually burlap—resulting in thousands of U-shaped threads called tufts. (Cut pile is achieved on a variation of the loop-pile machine. In this process, the loop is cut as soon as it is formed by the needle.)

Next step is to apply a latex-plastic backing to lock the tufts and serve as an antiskid finish. Then the carpet is dyed and "bloomed" to bring out the color, and cut to size.

• **Ambition**—In the early days of the industry, the big problem—as Barwick saw it—was that it consisted of hun-

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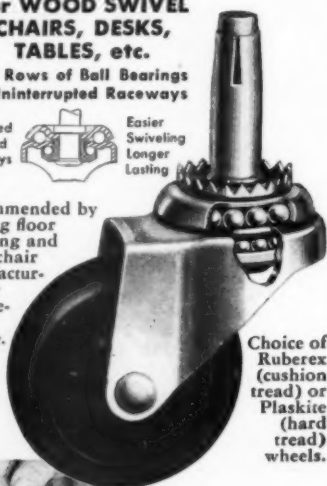
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dreds of nonintegrated plants scattered through the Georgia-Carolina region.

Barwick figured that, with luck and a lot of hard selling, he could wind up as one of the biggest manufacturers in the tufted textile business. From his merchandising experience, he knew that customers were getting away from dark, drab floor colorings. They wanted color, quality, and price—and something with a modern touch.

• **Improvements**—Meanwhile, two technical developments came along that convinced Barwick he was heading in the right direction. First, tufting machine manufacturers produced a new model that stepped up the number of "picks" from 40 per min. to 550 per min., which enabled a producer to turn out 12 lineal feet of 9-ft.-wide carpeting every minute. Second, the industry developed a process for vulcanizing a latex-jute backing that not only forms a tight tuft lock, but gives the rug non-skid properties. With these improvements, one good-sized mill, such as Barwick's LaFayette (Ga.) operation, can turn out enough carpeting in a normal day to cover the floors of about 100 three-bedroom homes.

Right now, tufted carpeting is one of the hottest things in textiles. Most of the big carpet makers, such as Bigelow-Sanford, are in the business. According to an estimate of the Carpet Institute, Inc., about 23-million sq. yd. of tufted floor covering rolled off the machines last year; and this figure does not include small scatter rugs and bath mats.

• **Gamble**—Barwick got his first glimpse at the tufting business during a tour of north Georgia in 1946, and figured that it was his future. Chief trouble was that he had no capital to invest—only his savings from the Navy. And his insistence on being the sole authority in his proposed company just about eliminated assistance from outside investors. Despite this, he decided, in February, 1949, to risk his total assets of \$4,500.

The first year went better than Barwick had expected. Leaving the Chatsworth "mill" in charge of an experienced tufting man, he took a 100,000-mile swing around the country, banging on rug buyers' doors at Sears, Roebuck, Montgomery Ward, and Macy's. By the end of 1949, he personally had taken orders for \$998,000 worth of merchandise—and the backroom mill had blossomed into a full-scale plant in Dalton, Ga.

The following year, Barwick doubled sales and then, in 1951, expanded capacity and tripled sales. Last year, E. T. Barwick Mills, Inc., consisted of five mills and three dye plants with headquarters in the Atlanta suburb of Chamblee, Ga. Last week, while other rug manufacturers were talking of curtailing operations, Barwick Mills

was considering expansion abroad.

• **One Owner**—Not all the Barwick companies bear his name, but all are wholly owned by Eugene Barwick, president of E. T. Barwick Mills, Inc.

Barwick figures that total assets of the combined companies might hit about \$8-million. But as to what the company's stock is worth, he professes to have no idea. "Why should I?" he asks, "I own it all."

Barwick makes his company headquarters near Atlanta because land and taxes are cheap. But one of his pet peeves is the Atlanta banking community. He could use some financing to handle expansion programs, but he hasn't had much success with the traditionally conservative Atlanta banks. According to him, you have to have \$1-million on deposit in an Atlanta bank in order to borrow \$50,000. The banks, however, claim that Barwick is unwilling to relinquish any control in return for financial assistance.

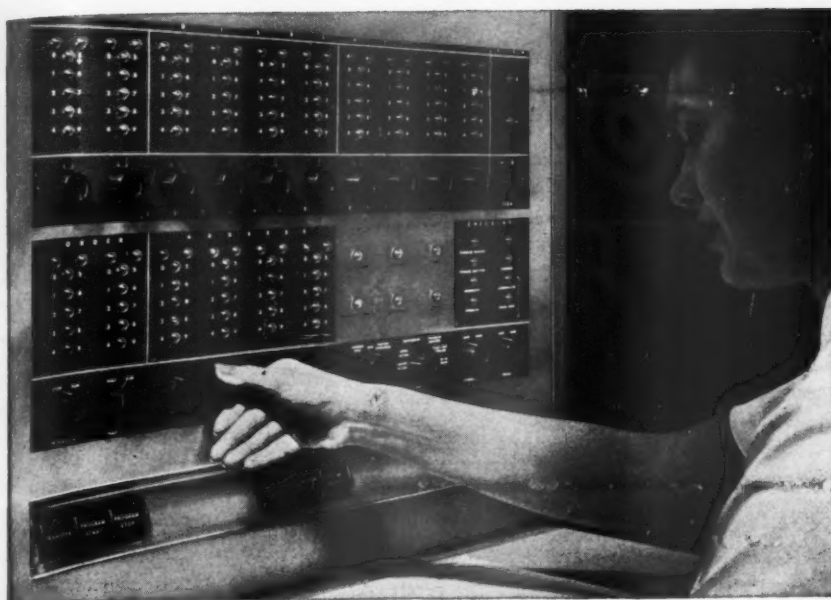
• **Into Synthetics**—Barwick Mills began by making cotton rugs exclusively. But a couple of years ago, Barwick got interested in synthetic fibers. Today, about 40% of the rugs and carpets now coming from his mills are made of synthetic fibers.

In 1950, Barwick was having trouble getting the kind of dye that he wanted for cotton. Either the colors were inconsistent or flat, or there wasn't enough variety available. So Barwick built a dye plant at Dalton, Ga., to make his own dyes. Since then, he has built two more.

There's a high degree of mechanization at Barwick Mills, from tufting to dyeing, drying, and sizing. It takes only two men to run the tufting machines—one operator and a man to watch for thread breaks. Most of the production force is involved mainly in setting up machine operations. As a result, Barwick's total labor force doesn't exceed 1,000 employees.

Barwick has 22 distributors scattered around the country, and he calls on them much like a trapper running a line. In addition, he's likely to drop in unannounced at any of his five mills or salesrooms in New York, Chicago, Dallas, or San Francisco—just to see how things are going, or to make a sale himself.

• **Salesman**—Most competing salesmen shudder when they hear that Barwick is calling on customers. Chief reason is that he carries with him the authority to shave or cut prices and conclude a contract on the spot. He'll spend as much time, money, and effort to sell a small department store as he will a chain. And, if the competition gets tight, he'll send one of his planes to pick up the buyer to bring him back to the plant to see how Barwick rugs are made.



Dec. 1, 1954, marked another great milestone in the automation of business procedures when The John Hancock Mutual Life Insurance Company of Boston, Mass., started operations with the first IBM 650.

IBM 650

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to accounting procedures.**

The 650's magnetic drum has 20,000 positions for storing data. Taking advantage of its all-purpose flexibility, John Hancock is now using this machine for preparing mortgage tables and figuring agents' commissions. Other Hancock 650's will be used for such basic accounting procedures as calculating dividends and cash values, and for processing policy value distributions. Another example of what IBM's hard-working EDPM can do for business and industry!



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Data
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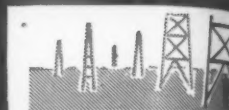
INDUSTRIES

The Supreme Court's decision last year okaying government control of the price of natural gas sold to interstate pipelines touched off a battle royal which may turn into one of the hottest issues Congress will face.

Producers are pushing hard for legislation similar to the Kerr Bill of 1950 which specifically removed them from federal regulation. The Kerr Bill passed Congress then, but was vetoed. Consumer-interest groups are again set to fight any similar bill.

Out of every d the

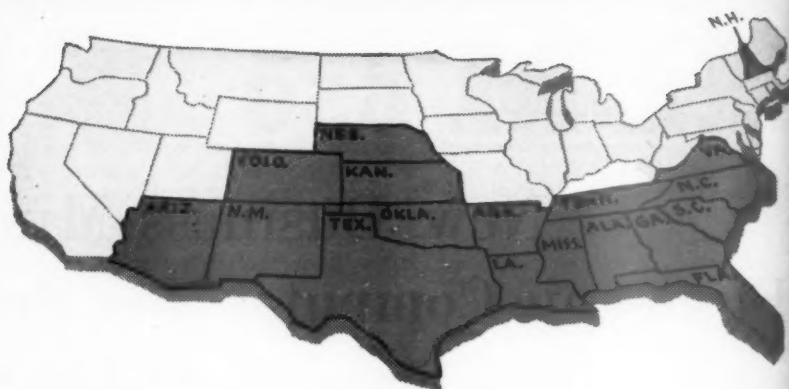
The producer
about 10



Here is where
fight is center

As in 1950, the gas producing states will lead fight against federal controls ...

These states, which include most of the nation's major oil and gas producing areas favored the Kerr Bill in 1950. Nearly all of them are solidly pushing for a similar bill this year.



Federal Control of Natural Gas

When the 84th Congress opened last week, the usual deluge of bills poured into the hoppers. Among those that could have the most far-reaching impact is a proposal to amend the Natural Gas Act to exclude independent natural gas producers and gatherers from federal control.

Since 1938, the Federal Power Commission has set the rate at which interstate gas pipeline companies must charge their customers. The issue now is whether FPC should control the price producers get for the gas they sell to the interstate pipelines.

Involved in what has become known as the "Phillips case" decision are about 5,000 producers, including such

big names as Phillips Petroleum Co., Humble Oil & Refining Co., Gulf Oil Corp., and Sun Oil Co. (BW—Aug. 21 '54, p. 29). Since most of these companies produce oil as well as natural gas, the two industries will present a united front in their lobbying activities.

• Side Effects—The outcome of the decision is important because it could affect the long-range supply and price of natural gas—thus touching the pocketbooks of the millions of natural gas users as well as the thousands of natural gas producers, pipeline companies, and local distributing companies.

It involves, too, such side issues as the extent of federal control over natural resources and the proper dividing

line between state and federal jurisdiction.

• The Split—It's a hot political issue, but not along customary party lines. Instead, the split is largely between producing and consuming states (maps). The producers want the price free to seek its own competitive level; the consumers figure they will get cheaper gas if the government sets the rates at the source.

An additional factor is the contingent of staunch proponents of states' rights, who will vote for the amendment because they feel the federal government should keep hands off.

The outcome is very much in doubt. Once before—in 1950—the House ap-

every dollar the consumer pays for natural gas....

producer
about 10¢

The pipeline company gets
20¢ to 30¢

The distributor gets
60¢ to 70¢

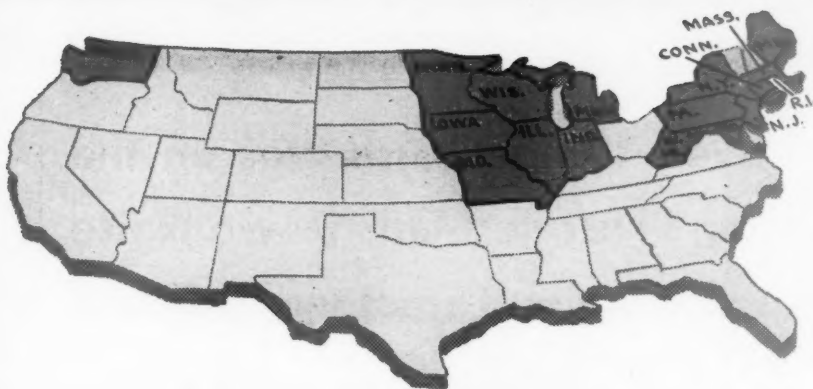


Under FPC control
since 1938

Regulated by state
and local agencies

... Lined up against them will be most
of the major consuming areas

These states, which embrace many heavy gas consuming areas, fought the Kerr Bill in 1950, and they're expected to fight tooth and nail to keep federal control now.



©BUSINESS WEEK

Gas The Battle Warms Up

proved similar legislation (the Kerr bill) 176-to-174, only after four votes were switched at the last moment. The Senate approved, 44-to-38, but Pres. Truman vetoed it. It could be that close again. This time, however, there isn't apt to be a Presidential veto if the measure gets by Congress.

• **Phillips Case**—The controversy developed in 1948, when FPC was asked to rule whether sales by Phillips Petroleum Co. to an interstate pipeline were within the agency's jurisdiction.

Phillips is classified as an independent gas producer because it doesn't transport its gas in interstate commerce, and is not affiliated with any pipeline that does. However, Phillips does sell

gas to interstate pipelines. Some of this gas is produced by Phillips, some is bought by Phillips from other producers.

Phillips' position was this: The Natural Gas Act specifically exempts production and gathering activities from FPC control.

The opposition—headed by consumer-interest groups—contended that while production and gathering activities were exempt, the sales by the producer to an interstate pipeline were not.

The issue narrows down to this: Is selling a part of production and gathering, or is it a step beyond?

• **Into the Courts**—FPC ruled that such sales were a natural part of pro-

duction and gathering, for how else would the producer dispose of his product? Therefore, the commission ruled, it did not have jurisdiction over these sales.

The matter didn't end there. It was taken to the courts, and in June, 1954, the Supreme Court handed down its 5-to-3 decision: In selling to an interstate pipeline, the producer or gatherer steps into the flow of interstate commerce, and his sales are subject to federal regulation.

FPC immediately set about putting the court's decision into force, for it felt it had no other recourse. In a series of now-famous orders, it notified independent producers that they must abide by the terms of the Natural Gas Act, and would fall under FPC regulation.

• **Setting the Stage**—The action by the

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court and by FPC left only one course open to the opposition: a Congressional change in law. Thus the stage was set for the showdown battle in the 84th Congress.

The consumer-minded groups feel that federal control is necessary, otherwise the consumer is at the mercy of the producer, because the price the producer charges must be passed along to the pipeline company, to the local utility, and eventually to the consumer.

The producer interests contend that while the pipeline company is a monopoly and thus subject to federal control, there is no monopoly on the part of the producer. Instead, he must compete with other independent producers for sales to pipeline companies. This group argues, too, that in the long run, gas prices will be higher under federal control, because control would tend to discourage exploration and drilling. This would create a gas shortage and run the prices up.

There is also alarm in the oil industry, which fears that control of natural gas at the wellhead could lead to control of crude oil production, since oil and gas often are taken from the same well.

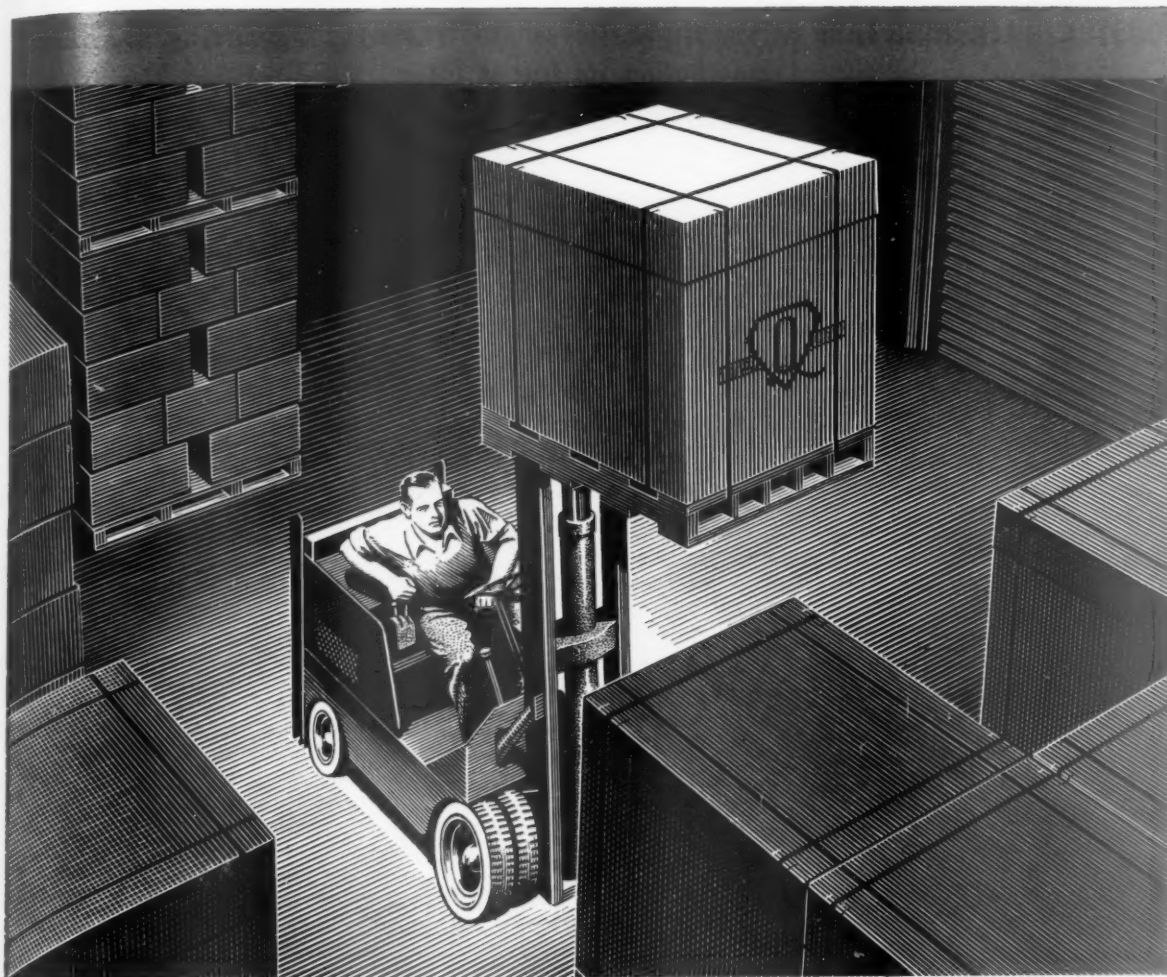
Some state conservation commissions also are concerned that there might be conflict between their actions and those of the federal gas regulatory body. For example, it's a common practice to require some gas to be returned to a field to aid in oil production and conservation. Such an order by a state agency might easily be contrary to an FPC order on the rate of supply from a producer to a pipeline company.

• **Lines Form**—The oil and gas industries are primed to throw all the weight they can into the effort to get legislation through that would remove the independent producer from federal control. They will be aided in Congress by producing state congressmen—including Senate Majority Leader Lyndon Johnson and House Speaker Sam Rayburn. And they will be aided by state conservation bodies.

The opposition, however, is equally determined. In Congress, it includes such powerful figures as Sen. Estes Kefauver and Sen. Hubert Humphrey. There will also be a parade of mayors and other state officials at committee hearings on the proposed legislation. Conscious of the fact that 1956 is an election year, they will be championing the cause of the consumer.

Lining up with the opposition is the National Institute of Municipal Law Officers, which fought the bill before and apparently is ready to do so again. This group fears that if producer prices are freed of control, the consumers' gas bill will shoot up \$200-million or more annually.

Pres. Eisenhower, even though he



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"... the gas industry is marshaling its forces for a life and death struggle..."

NATURAL GAS starts on p. 76

may be willing to sign the legislation, probably will not lift a finger to help get it passed.

• **Wanted: A Leader**—So, as matters now stand, this may become the most closely contested issue facing Congress this year. Many congressmen, perhaps remembering what happened to Sen. Robert Kerr in 1950, are reluctant to take the lead in pushing the legislation. It's virtually certain that Kerr won't.

Kerr was in the forefront all the way through in 1950, contending that restrictions on producers would endanger the future gas supply of the nation. He apparently had been given good reason to believe that Truman would sign the bill when it was passed. But a delegation, headed by Sen. James Kem of Missouri and Sen. Paul Douglas of Illinois and backed by the mayors of 10 large cities, made a last ditch appeal to Truman, and he vetoed the bill.

In 1952, Kerr's stand came back to haunt him. He was seeking the Presidential nomination and was frequently confronted with the charge that his gas bill efforts were proof that he sided with the "vested interests."

• **Likely Candidate**—That's why, in 1955, proponents of the legislation are having a hard time finding a strong congressman to head their forces. It appears now that—in the early stages at least—the reins will be held by J. Percy Priest of Tennessee, chairman of the House Interstate & Foreign Commerce Committee, to which the gas bill will be routed.

Priest, who favored the Kerr bill in 1950, has already said he plans to have the full committee, rather than a subcommittee, consider the bill. And he indicated that it would be high on the committee's agenda. Washington observers note that Priest has worked closely in the past with Rayburn.

• **Showdown**—Meantime, the industry is marshaling its forces for what L. F. McCollum, president of Continental Oil, feels is a life and death struggle. "There is more at stake than just the survival of our industry," he says, "because the entire American consuming public will suffer irreparable loss unless we win the battle." He points out that the price paid by natural gas transmission companies for gas in the field actually is but a tiny fraction—it ranges from 6% to 10%, depending on where the gas is consumed—of the price to the customer. "The field price for the gas bears about the same relationship

to the consumers' price as does the cost of water to the price of a cake of ice," he says.

Since the end of World War II, the demand for gas as a fuel has had a tremendous growth. In 1946, it supplied 14½% of the mineral energy consumed in the U.S. In 1953, it supplied 23.7%. The report of the American Gas Assn. shows that there were more than 21-million natural gas customers at the end of last March, and there are long waiting lists of potential customers. Many more will come with the growth of population and industries and the construction of facilities to unserved areas. According to the industry, the problem of supplying the demand over the long pull is a serious one, since the demand for gas has more than doubled in the last 10 years, while proved reserves increased only 43%.

• **Retrenching**—While the issue hangs in the balance, most producers are pulling in their expansion horns. As a direct result of last June's rulings, Continental, for example, has shelved plans for drilling and development of gas wells over the next year, except where contracts already exist. And no decision on this large item will be made until Continental finds out what Congress is going to do about the matter.

The pipeline companies, of course, are really feeling the pinch. Many producers—who envision a shift toward intrastate selling of gas, beyond the jurisdiction of FPC—are refusing to sell their gas to interstate pipelines. This means that many proposed new gas pipelines are in trouble. American-Louisiana Pipeline Co., which had planned to build and operate a 500-million cu. ft. a day pipeline from Gulf fields to the Detroit area, may have to junk the idea because producers who had contracted to supply it with gas are now backing out. And a Tennessee Gas Transmission Co. affiliate, which had planned a pipeline from Corpus Christi, Tex., to Monroe, Wis., has shelved the program—for the time being, at least.

• **Squeeze**—Meanwhile, FPC is caught in the middle. It gets scathing criticism from all sides for its efforts to regulate the producers, even though the agency took jurisdiction only when ordered to do so by the Supreme Court.

Nevertheless, producer interests contend that FPC acted in a harsh and impractical manner when it clamped down on the producers within hours after the court had refused to review its June decision. FPC not only issued the orders, it made them effective retroactively to the June date.

Even those favoring FPC control censure the agency, on the grounds that it tried to be as harsh as possible to make it appear that control of producers was unwise and impractical.

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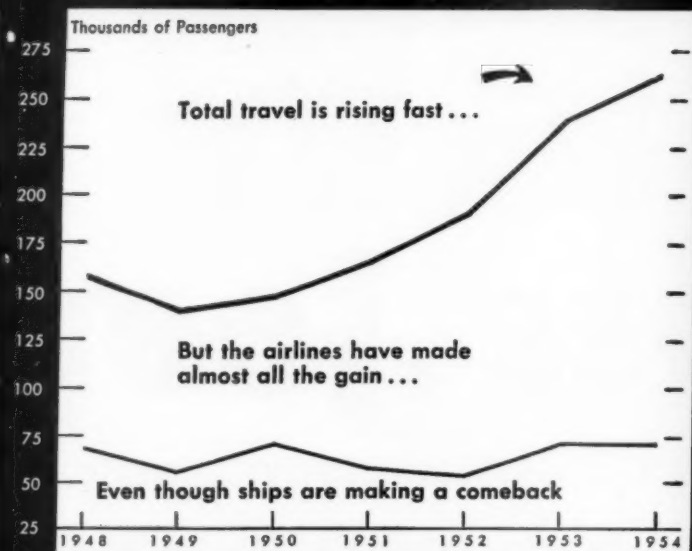
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Ships, Planes: New Race Is On

The battle for the Pacific championship seems to be due for a round of fast fighting in 1955.

The rumblings of an even bigger boom in Pacific travel—on top of a giant 66% jump in six years despite fighting in the Far East (chart)—have spurred both airlines and steamship companies to action. Barring new international complications, travel men look for the surge of vacationists and businessmen across the Pacific to mount year by year at an annual rate anywhere from 15% to 40%.

Both sea and air carriers are moving into position to grab off for themselves a fatter share of this expanding traffic in the vast Pacific basin.

• **Comeback**—The hardest push is coming from the steamship men. That's because they start off the year with a big handicap to overcome. After the war, the transpacific planes shot off to such an overpowering lead in the Pacific passenger trade that for a while it was a question if steamship companies would even try to catch up.

The ships are still lagging. But the prominent role taken in the last few years by Pan American World Airways and United Air Lines in the Pacific area has tended to obscure what has been happening on the sea lanes.

It's true that since 1948 the transpacific airlines have more than doubled

the number of passengers they carry in a year, and their share of the total volume has risen from 57% in 1948 to more than 74% in 1954.

At the same time, the ocean liner has been staging something of a comeback—as the figures show—after slipping at first under the competitive impact. And far from hollering “uncle,” the steamship companies have just launched major construction programs in a bid to win more of the expanding traffic.

• **Sea Attack**—One of the biggest expansion programs is being launched by Matson Navigation Co., an old hand in the luxury travel business. Matson plans to put two new 360-passenger, single-class luxury liners into the water to restore full-scale passenger service between California and Australia.

World War II forced the abandonment of this service. In the postwar period, with planes taking the lead in passenger traffic, Matson has contented itself on the Australia run with four freighters.

Now a flurry of developments has set off Matson's new program:

• **The British-owned Orient Line** last year diverted its England-to-Australia ships for three scheduled voyages from Australia to Vancouver, B. C., and San Francisco. So many flocked aboard that Orient ran a fourth trip in December and plans more in 1955.

• **On the plushy Lurline**, between California and Honolulu, Matson carried 39,000 passengers in 29 round trips in 1953, operating at 93% capacity and a few hundred more in 1954 to bring the load factor to 94%.

• **Stanford Research Institute** made a detailed study of the traffic potential for Matson. The line is clamoring about the results, except to say that they “augment” its own conclusions.

So it's more than just a gambler's hunch that is leading Matson to speed up its passenger expansion. The company is buying two new Mariner hulls from the Maritime Administration, and plans to spend about \$40-million to build passenger accommodations into them. That way it hopes to have the new vessels afloat by mid-1956. Building from the keel up would have delayed the start of service to 1959.

• **Second Contender**—American President Lines is embarking on a subsidized ship construction program that could total \$225-million in 10 years.

Last summer, APL paid the government \$13-million for its transpacific passenger ships, Pres. Cleveland and Pres. Wilson, which had been operated till then under charter. This was to be part of a \$65.8-million spending program to triple the line's capacity for round-the-world cruise passengers.

Two weeks ago, however, the Federal Maritime Board announced a subsidy agreement of even broader scale. It includes the earlier program, calls for expenditure of \$175-million in 10 years, and provides for another possible \$50-million passenger ship purchase (to replace the Cleveland and the Wilson in 1964-65).

As it stands, the program will add four new luxury passenger-cargo ships, now in the design stage, and four converted Mariner ships to APL's round-the-world fleet. The combination vessels, each carrying 100 passengers, will cost about \$14.5-million each; the Mariners, with luxurious outside cabins for 12 passengers, will cost around \$4.5-million each.

• **Scrambling In**—The travel boom talk is bringing others into the fray, too. Hawaiian Steamship Co. wants to charter the 600-passenger ship La Guardia from the government for the Pacific Coast-Hawaii run.

The veteran San Francisco shipping tycoon, R. Stanley Dollar, is also getting the travel itch again. Dollar emerged with \$9-million cash from the government's sale of American President Lines—the old Dollar Line—to private interests. This time he's taking to the air. He has formed South Pacific Air Lines for a passenger shuttle service between Honolulu, Christmas Island, and Tahiti.

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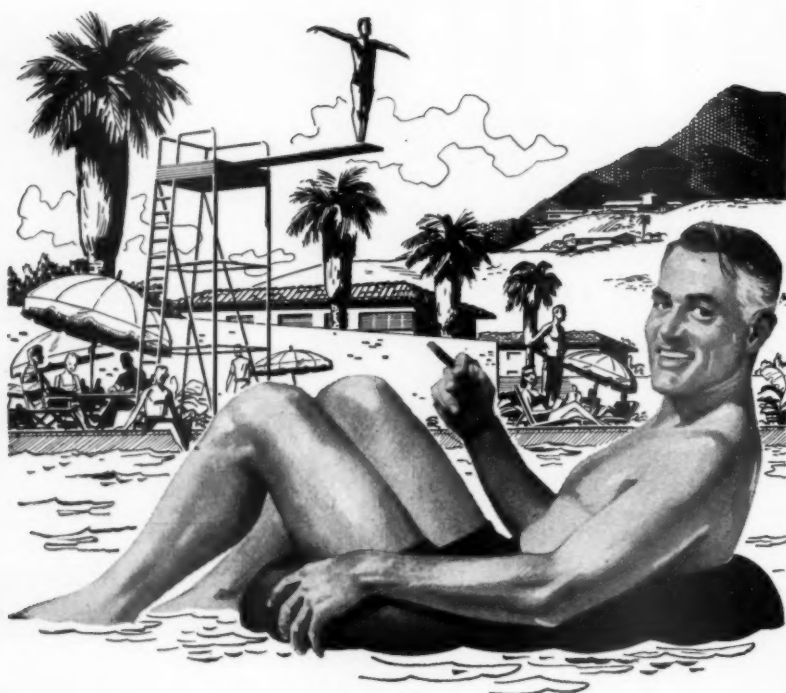
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a big gain since the extension of coach service two years ago to Hawaii, and later throughout the Pacific basin. Pan American boosted its Honolulu passenger volume 56% in the first year of tourist service with a slight increase again in 1954. United's tourist service started later and made an 8.5% gain in 1953, a 26% gain in 1954.

The airlines are not resting on their laurels, however. Pan American last week added a fourth weekly flight from Portland-Seattle to Honolulu. PAA's volume on that run has zoomed, partly as a result of its installment-plan travel (BW—Apr. 17 '54, p. 66). In the six-months after the plan started, passenger volume on the run was three and a half times the same 1953 period.

Pan American is also seeking permission for a San Francisco-Tokyo Great Circle route that would knock 1,000 mi. off the present Honolulu-Wake Island route.

United Air Lines switched last week from Stratocruisers to DC-7s in its first-class Hawaii service (two flights weekly from San Francisco and two from Los Angeles). United also has six weekly coach flights from each city. (Pan American uses its big Strato-clippers for both classes; its engineers have doped out a flexible system for converting first-class space to tourist at a few hours' notice, as need arises).

Other lines, too, are planning route extensions. Canadian Pacific Airlines plans to start next May a polar cap route from Vancouver to the Netherlands that would hook into its Pacific routes, giving the first direct service between the South Pacific and Europe via North America. In February, Japan Airlines will extend its route to Hong Kong (present terminus is Tokyo). Northwest Orient Airlines and Qantas Empire Airways also operate transpacific services (Qantas is owned by the Australian government).

• **Heart**—Hawaii is both the physical and spiritual heart of the drive to boost Pacific travel. It is girding for the rush by building more than 1,000 hotel rooms at Waikiki (BW—Jul. 18 '53, p. 142). Travel to the islands has doubled, and tourist spending has quadrupled, since 1939's prewar peak.

The Hawaii Visitors Bureau is responsible for the creation a couple of years ago of the Pacific Area Travel Assn., with 98 members in 16 countries. It has taken in as active members both governmental bureaus and the sea and air carriers, with hotels and travel agents as allied members.

Under PATA urging, Japan, the Philippines, and the U.S. reciprocally eliminated visa fees; Fiji and Singapore abolished visa requirements; Indonesia cut its visa red tape; and New Zealand increased dollar allowances for tourist travel to the U.S. and Canada.

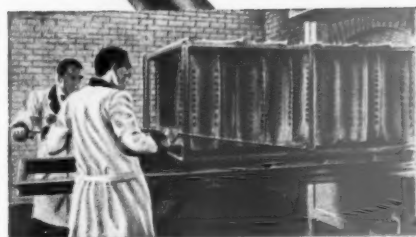


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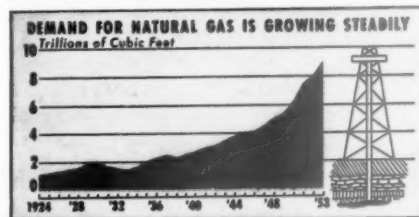
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Must these wasteful conditions prevail?



As an enlightened conservationist Rayonier calls for preservation of our unique primeval rain forests and wild life sanctuaries. We support measures for opening them for nearby residents and the world's tourists to enjoy. But today, one 896,000-acre park, for example, is practically impenetrable . . . does no one any good!

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What is the answer?



life...

natural resources:



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3. Sustain growth in all woodlands through scientific forestry.
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Rayonier's growth is not dependent on these public-owned lands. But in the interest of realistic conservation, sound economy and scientific forestry management, we propose that these unused excess timber regions be made available for industry to cultivate and harvest under government supervision. Only then will the U. S. A. be best served by its *replenishable* natural resources.

cellulose chemistry

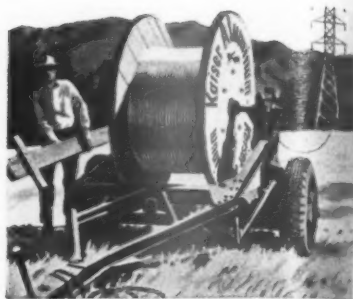


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HOW PROGRESSIVE MANUFACTURERS OF ELECTRICAL MATERIALS ARE

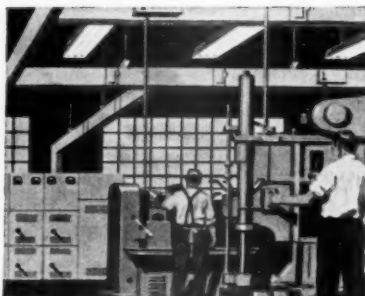
Cutting America's electric bill ...with Aluminum



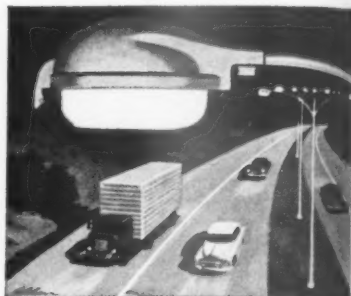
1. ELECTRICAL TRANSMISSION lines of light weight Kaiser Aluminum cut construction costs for utilities. Longer spans, fewer structures, lower conductor prices mean less investment than with copper.



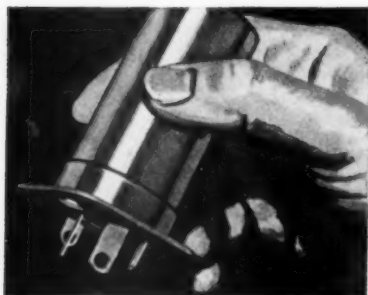
2. KAISER ALUMINUM covered wire for electrical distribution lines, and Triplex for service drops, costs far less than copper. And because aluminum is light in weight, it's easier to string—faster and more economical to install.



3. BUS CONDUCTORS of Kaiser Aluminum provide safe, efficient, low-cost distribution of large amounts of current in plants, office buildings, power generation stations, substations. Light weight aluminum is easy to handle, reduces installation costs.



4. STREET LIGHTING standards made of extruded aluminum won't rust, will last for years without maintenance. Light weight aluminum is easy, economical to fabricate and erect. Aluminum lamp reflectors can increase brilliance as much as 20%.



5. ELECTROLYTIC CAPACITORS made from high purity aluminum foil, make possible better performing, more dependable radios, TV sets, hearing aids. Kaiser Aluminum's production controls and research assure foil of uniform high quality.



6. IN ELECTRIC MOTORS, aluminum is the ideal metal for rotors. The lightness of aluminum permits many design economies. And because it can be cast to close tolerances and easily machined, Kaiser Aluminum reduces fabricating costs.



7. FOR EVERY KIND of electronic equipment—from radar to radio—Kaiser Aluminum is playing a vital role because of its conductivity, lightness, strength, economy. No other material equals aluminum's combination of properties.

THE PRODUCTS SHOWN HERE are only a few of hundreds which demonstrate the tremendous advances made by manufacturers of electrical equipment through the use of aluminum.

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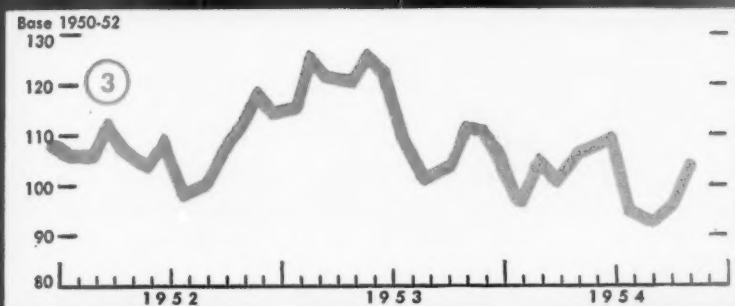
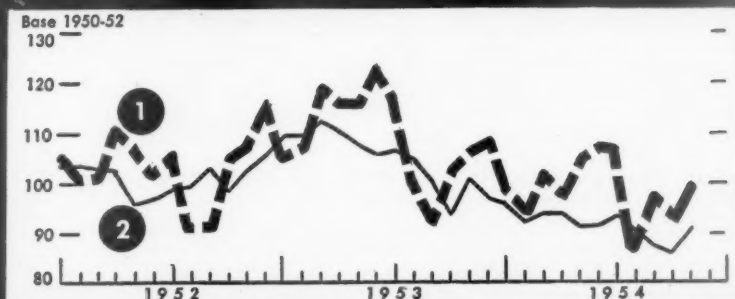
New Answer to Old Problem

In an industry such as rubber, where you can't add up production directly in units—tires and hot water bottles, for instance . . .

... You can measure

- 1 Electric power used,
- 2 Manhours put in.

3 And, by discovering how both affect output, finish with . . .



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New Way to Gauge Production

What the seismograph is to the geologist, the production index is to the businessman. It tells him what's going on and where, and he can figure out from it what's likely to happen next. It enables him to schedule his own production on a more rational basis—provided, of course, that the production index is reliable and timely.

Unfortunately, that doesn't seem to have been true of all indexes in the past. About a year ago, the Massachusetts Dept. of Commerce realized that there were shortcomings in its own picture of industrial production. Like most, it was a polyglot affair that threw together carloadings, employment, and kitchen sink. It wasn't giving a true picture of conditions from month to month. It was often full of apparent contradictions. Manhours worked, for instance, might show in the index as falling when other business indicators were rising—perhaps because newly installed machines in some

big plant had temporarily cut down labor requirements. The index had no provision for explaining or resolving such phenomena.

The department decided to design a new method for indexing monthly production. It employed Prof. Harry B. Ernst, of the Tufts College Dept. of Economics, as consultant. What Ernst came up with differs considerably from traditional indexes. It is simpler and speedier, and it should give more accurate regional and industry breakdowns. It should also make it possible to find out more about industrial productivity and mechanization or automation, and to do a better job of forecasting—particularly of power needs.

• **System**—Taking a lead from the input-output method (BW-Dec.15'51, p94) of Wassily Leontieff, under whom he studied at Harvard, Ernst experimented with the use of manhours and kilowatt-hours to produce a production output figure.

Ernst made two key assumptions: (1) that if you know how much power and how many manhours an industry is putting into production, you can figure out how much product will come out; and (2) that changes in the kilowatt-hours of electricity used by an industry will give an adequate measure of the use of machinery.

It was simple to get manhour data—from the U.S. Bureau of Labor Statistics. It was much less simple to get electric consumption figures by industries; such figures, insofar as they exist, are held confidentially by utility companies. But Massachusetts utilities—because it was in their own interest to be able to predict power loads—decided to cooperate. They worked out a system of using sample companies within an industry. They then began sending industrial consumption reports in batches to the Electric Coordinating Council of New England, which forwarded them—eliminating the names of companies—to

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Ernst and the Massachusetts Dept. of Commerce.

• **Translation**—Next came the task, for Ernst, of setting up an equation by which the independent variables (man-hours and kilowatt-hours) could be related to the dependent variable (amount of production). This relationship is called the production function. It differs, of course, from industry to industry.

Ernst calculated the function of each industry by going back to previous years and finding how the three variables were related then. He set up a formula that he could bring forward to the present and project into the future. By inserting reported manhour and kilowatt-hour figures for any given month or year into the formula, he could calculate that month's or year's production or, by making power the unknown factor and switching the formula, Ernst could give the utilities companies a good projection of how much extra electric power would be required to produce a given output. This is leading to some striking conclusions: For instance, the production function for the rubber industry worked out as: $\text{Output} = .573 \times \text{manhours} + .674 \times \text{kilowatt-hours} - 23.86$, showing that the Massachusetts rubber industry is one of "increasing returns"—to expand production by 25%, you need to increase electric power and manhours by only about 20%.

Ernst's process is not foolproof and automatic; his production functions are not "timeless." Technological changes in an industry from year to year change the industry's production function—change the relationship of manhours, power, and output. Thus, periodic revision of the equations is necessary. And when you put the separate industrial indexes together for a regional or national business index, you have to move carefully; each industry has to be assigned an accurate weight.

Because of such problems as these, Ernst's theory—though essentially simple—may well take a long time to perfect. And undoubtedly it will run into a kind of trouble common to almost all production indexes: inadequacies in reporting and sampling techniques.

• **Takers**—Still, the Ernst theory has caught the eyes of many veterans in the field of index-making. The Federal Reserve Bank of Boston, for instance, has employed Ernst to start work on a new production index for all of New England. Other Federal Reserve banks, and the U.S. Labor Dept., are looking over Ernst's theory carefully.

Businessmen may find the new system helpful, too. If it is more accurate than previous business gauges, as Ernst believes it is, it will give business a more reliable guide for forward planning.



Yesterday, fiction; today, *Fact!*

As children, many of us thrilled to tales of a fantastic future. We read of mile-a-minute travel on wondrous roads that would leap-frog congested cities, bridge vast valleys, and bore through rugged mountains. Such marvels, we believed, would come to pass in the 21st century.

But, in a single generation, engineers of vision and unfettered imagination turned fiction into fact! Today, marvelous turnpikes carry cars, trucks, and buses in a bee-line to cut travel time between important cities. Here is the perfect example of how the engineer constantly imposes new tasks on himself. Engineers developed a motorcar for which the old wagon roads were inadequate. So, engineers developed new roads. Now, their task is to design into the automobile safety that

will permit us to take full advantage of our expressways and turnpikes.

In large measure, the pace of man's progress is set by the contributions of the engineer . . . this man to whom nothing is fantastic, nothing impossible. The engineer never asks, "Can it be done?"; he knows that it can. His questions are the practical ones of: "How best? How much? How soon?"

In finding his answers, the engineer clears the path for cooperation between financier and owner, and builds a foundation of knowledge that means tomorrow's miracles can be accomplished today . . . and creates a world where man finds life more productive, more enjoyable, more safe.

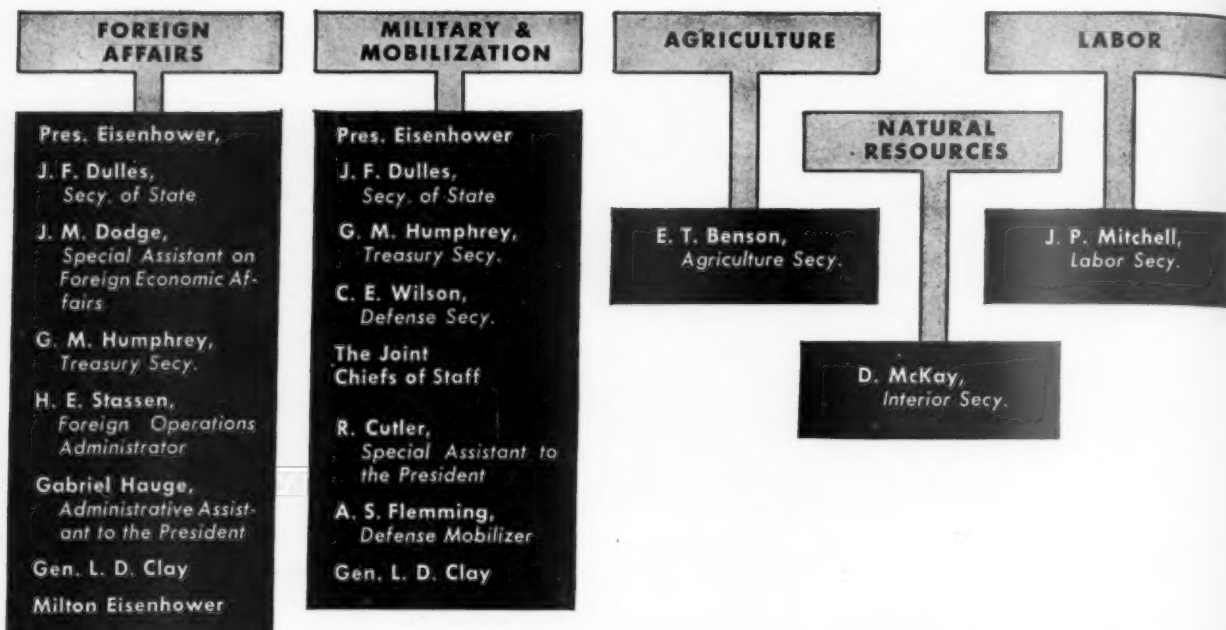


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Who Makes Government

It Depends on the



Eisenhower Gets His Staff Machine

The chart above illustrates a notable feature of the Eisenhower Administration, as it operates today. In some fields of administration, generally the most urgent ones, the President himself is strictly the head man. In others, he leaves department heads virtually on their own.

As a generality, the President keeps the firmest hold on the reins in those fields where he is preeminently qualified, or most deeply interested. Thus in military affairs, in relations with our allies, he considers himself the top authority. In other fields, such as labor and agriculture, he keeps hands off.

The present table of organization has been a slow development over the past two years. But one principle has remained constant. Eisenhower has never relaxed his proclaimed insistence on getting absolutely top-grade men,

mainly from business, to handle the responsibilities of the departments.

Less publicly, he has insisted—as have his aides—on more and better staff work in doing the public's business.

• **Heart's Desire**—By this time, Eisenhower—like all Presidents—has fashioned an Administration molded pretty much to his own liking. He has assembled advisers to whom he wants to listen. In areas where no such arbitrator existed, he has named an assistant to come up with decisions when wars break out between department heads over policies that affect them all. Banker Joseph M. Dodge, for instance, has been brought back as special assistant on Foreign Economic Affairs to arbitrate between Dulles, Humphrey, Stassen, and Benson, on such problems as how much and what kind of aid should go abroad.

On the other hand, the President al-

ready had Sherman Adams to handle conflicts such as that which arose between Benson, Stassen, and Dulles over the firing by Agriculture of Wolf Ladejinsky, the Russian-born expert on land reform. Adams saw that the thing was settled before Congress could move in. Ladejinsky was transferred to Stassen's Foreign Operations Administration to work in Southern Vietnam.

• **More Assured**—Eisenhower's style of running the government has changed from his early days. Notably, there's his new assurance in most of the roles he's called on to play as key man on peace, prosperity, and politics.

When he came into office, the President already had plenty of background, experience, and conviction in the major issues of military policy and foreign affairs. His years as a top general in Europe plus his postwar tour as NATO

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ATOMIC

Pres. Eisenhower
L. L. Strauss,
chairman, Atomic En-
ergy Commission

JUSTICE

H. Brownell, Jr.,
Atty. Gen.

POLITICS

Pres. Eisenhower
Sherman Adams,
Assistant to the Pres-
ident
Leonard Hall,
chairman, Republi-
can National Com-
mittee
A. E. Summerfield,
Postmaster General
H. Brownell, Jr.,
Atty. Gen.

PROSPERITY

Pres. Eisenhower
G. M. Humphrey,
Treasury Secy.
A. F. Burns,
chairman, Council of
Economic Advisers
Gabriel Hauge,
Administrative Assist-
ant to the President
Sinclair Weeks,
Commerce Secy.

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ne Geared to the Job

commander in Europe made sure of that.

He brought with him a conviction on at least one key domestic issue: the idea that the government in this day and age has the responsibility for preventing another economic depression. He assembled at the White House a staff of real depth in this field. On other subjects—Labor, Agriculture, Interior—Eisenhower was not too well informed and less concerned. In these areas, the President in general still leaves it to the department head to run the show.

It all adds up to this: Eisenhower and his aides have, either in themselves or readily available, expert knowledge and advice on which to base their decisions cutting across the dozens of departments and agencies of government.

• **Role of Cabinet**—The Cabinet as such remains what it was under other

Presidents—primarily a group of division heads. Their main job is running their shops; rarely are they called on, as a Cabinet, to vote a policy decision. Key department heads do have a say in policy-making groups such as the National Security Council. But they sit with noncabinet officials perhaps with Allen Dulles, chief of the Central Intelligence Agency, and the Joint Chiefs of Staff, any one of whom may be more influential on a given issue than any Cabinet man present.

The Cabinet remains essentially a discussion group in which all hands are filled in on issues, and on the general state of their management of the nation's business. But the members know that the really big problems don't come to Cabinet meetings to be worked over until a decision is ready for recommendation to the President.

The Cabinet now has its own secretary—Max Rabb, a White House assistant from the beginning. Rabb also operates as staff to the sub-Cabinet—a group which, meeting regularly with Sherman Adams, takes much of the load off department heads either by handling a problem itself—or by thrashing out the thing before submitting it to the full Cabinet.

I. The Basic Changes

When they came into office, neither Eisenhower nor his top aides had any idea that major changes were needed in the structure of government to carry out their job. They took what they found—either as practical men of business, or as practicing politicians—and tinkered with it to suit their fancy.

Eisenhower's train of thought and that of his new Cabinet was fairly clear. He would appoint the best men in the country as department heads. They would then become the team. He would

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be the head coach, supported by a few special advisers at the White House.

• **Settling Clashes**—Two years later, this kind of thinking is out the window. Many problems overlap two or more departments, so the President is using a White House staffer or a staff group to resolve the policy differences that frequently split his department heads.

Dodge has complete access to the President, and will be called on to resolve policy snarls that frequently tie up the State Dept.'s Dulles, Foreign Operations chief Stassen, Treasury's Humphrey, Agriculture's Benson, Commerce's Weeks. This arrangement replaces the previous system under which Presidential economic adviser Gabriel S. Hauge often had to deal almost as a sideline with such touchy questions as raising tariffs on watches and minerals, and the buy-American policy. Dodge from here on out will have the job full time.

• **The Boss**—The President beefed up the National Security Council, under the direction of a good friend, Robert Cutler, now Special Assistant on National Security Affairs. The President sits in on meetings, hears the Joint Chiefs and department heads—but in the end, makes up his own mind on the big issues.

That is what he did in overruling air strikes at Dienbienphu, after they had been approved by the National Security Council, including Dulles and all the Joint Chiefs, except Army Chief of Staff Ridgway. Similarly, he overruled the same group, again with the exception of Ridgway, when it approved throwing the whole weight of the U.S. against any Red Chinese attempt to take Nationalist-held Quemoy Island in the Formosa Strait. His reasoning went along with Ridgway's: There is no such thing as an "immaculate war" that can be won by airpower alone. Ridgway argued we lacked the troops to back up the inevitable commitments.

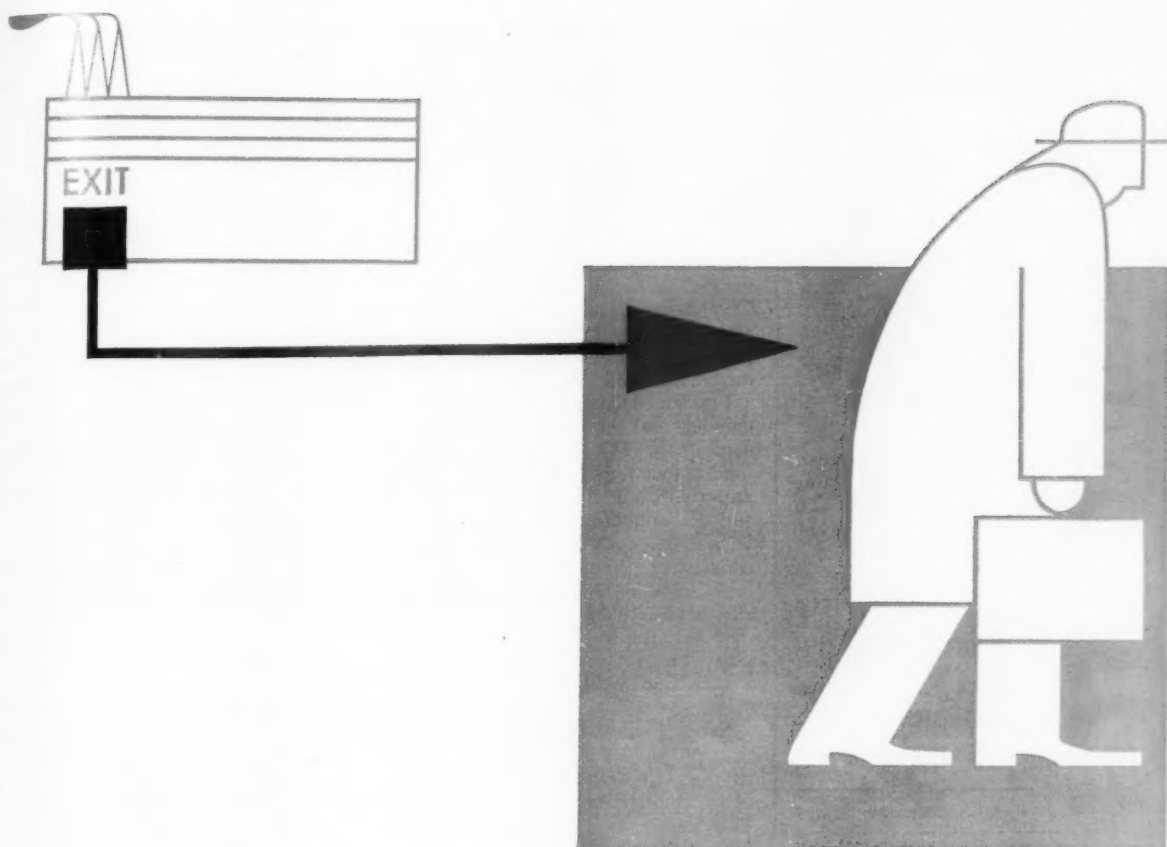
Yet Eisenhower obviously ruled against Ridgway—and showed strong leanings toward Humphrey—in explaining his reasons for cutting 400,000 men from the armed forces, mainly the Army.

II. Line-Up of the Team

As the President prepares to sell his new legislative program to Congress and to the country, congressmen and Washington insiders have a better idea of who fishes and who cuts bait in the Administration.

Here's a brief rundown on the key policy-makers and influences:

Military and mobilization. The President is the boss here. There are people who advise and inform him, but he is well aware that he knows as much or more about the military situation of



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the U.S. and the world as those who talk to him—and they know it, too. Eisenhower made his position plain in his State of the Union message this week when, after describing cuts in Army manpower and increase in aircraft and new weapons, he said, "These emphases in our defense planning have been made at my personal direction after long and thoughtful study."

Besides these formal advisers, Eisenhower also from time to time relies on such close friends as Gen. Lucius D. Clay, who presently is handling a tough job, but a nonmilitary one—preparing the new \$50-billion highway program for presentation to Congress.

Foreign Affairs—As European commander, and more particularly as head man of NATO, Eisenhower acquired solid convictions on such things as the importance of the U.S. to its allies, and the importance of allies to the U.S. His lower tariff, trade-not-aid convictions spring largely from this. He has always been definitely internationalist, and is likely to compromise less, now that the big Republicans who opposed him on such things as tariff no longer have positions of power in Congress.

Secy. Dulles is undoubtedly head man on foreign policy advising, besides running the globe-girdling operations of his department. But Dodge, for instance, also sits in the inner ring at the White House, bringing with him an intimacy with the President derived from Dodge's service as Budget Director during the big budget-cutting days of the Administration.

Nelson Rockefeller, newly named to the job of Special Assistant for Psychological Warfare, has yet to establish his niche—but he has been cut in on the policy-making process in all the key agencies in the foreign relations field.

Gabriel S. Hauge, economic assistant to the President, and George Humphrey, often labeled the Administration's real "strong man," have cut plenty of ice in foreign affairs, too—Hauge on tariff and other policy matters, Humphrey on economic activities overseas such as the Export-Import Bank, and on foreign aid in general.

On foreign affairs—as on other matters, including such things as agriculture—the President's brother, Milton Eisenhower, now President of Pennsylvania State University, is credited by insiders with having as strong a voice as any when he wants to exercise it.

Business and economic affairs. The President came into office without much business background but, with the help of those close to him, he has learned well and fast. Secy. Humphrey has lost some battles and skirmishes, but his rating with the President hasn't slipped, so far as can be

detected. Hauge and Arthur F. Burns, chairman of the Council of Economic Advisers, see the President every Monday morning to brief him on what's going on and what's ahead in business generally. Eisenhower is no longer just a listener; he is informed and interested enough to ask sharp questions.

Commerce Secy. Weeks, while largely involved with running his huge department, is heard at the White House more often than most people think.

Politics—Eisenhower is probably more powerful as a GOP politician than ever before. He thinks his strategy figured large in the demolishing of Sen. Joseph R. McCarthy. He is continuing to push programs—such as tariffs—that GOP leaders of the right wing have opposed. A couple of weeks ago, he called a private, unpublished White House dinner for the top politicians on his team to talk post-election politics—the strategy the GOP should follow during the next two years of Democratic rule of Congress. There was no doubt who was in charge, or who had pretty much decided what the general approach would be.

On day-by-day operations, Sherman Adams—the Assistant to the President—looks after the political implications of the problems that go across his desk. GOP Chmn. Leonard Hall and Vice-Pres. Richard Nixon do their politicking from their own respective posts. Postmaster Gen. Summerfield and Atty. Gen. Brownell are part-timers who still rate high.

III. The Urge to Decide

Eisenhower's reliance on staff will continue. But from now on, watch for the men who are the President's eyes and ears to work just as hard at checking on administrators to see whether they're carrying out policies decided at the White House. Eisenhower is keeping at least this part of the "team concept." There's going to be greater emphasis on agency heads hewing to the Eisenhower line in their own speeches, in appearances before Congress, and the like.

• **Straight-Line**—This also is a reflection of Eisenhower's army training—the insistence, in so far as possible, on a straight-line chain of command from the head man at the top right on down.

Where the agencies of government were reorganized, this was the main idea. And this can be quite important. For one thing, it is part of the Eisenhower approach to politics—that is, if a problem exists, then it is the business of the Chief Executive to use whatever federal authority he has to solve it. Under the Democrats, there were many issues of high political voltage that the party tended to keep alive and keep

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Bostitch TS-S Tacker with Outward Clinch—It anchors staples inside soft materials entirely from the outside. Staple legs spread to form strong, tight clinch. Ask your Bostitch Economy Man for a demonstration.

STAPLES HOLD BETTER AT ONE-TENTH THE COST! Trans World Airlines overlook no detail in assuring the safe, swift arrival of air freight shipments. Shipping bills fastened to cartons with even the best tape sometimes tore loose in damp climates. And taping cost \$14 per thousand bills.

A Bostitch Economy Man suggested stapling the bills with a new Bostitch tacker that "spread-eagles" staple legs inside carton walls. TWA tried it, found stapling four times faster and far superior in holding power. Cost: \$1.40 a thousand. Now all major TWA stations are Bostitch-equipped!

How much can you save by switching to Bostitch stapling?

Your Bostitch Economy Man can tell you.

He's one of 350 trained fastening specialists working out of 123 cities in the U. S. and Canada. There are over 800 kinds of Bostitch staplers in his cost-cutting repertoire. Look up "Bostitch" in your telephone directory, or check the coupon at the right.

Fasten it better and faster with

BOSTITCH®
STAPLERS AND STAPLES

BOSTITCH, INC., 441 Mechanic St., Westerly, R. I.

I'd like to know exactly how stapling can cut costs in our fastening operations. I'm particularly interested in the following applications (please check):

HI-SPEED PRODUCTION FASTENING

- ☐ stapling vs. riveting
- ☐ stapling vs. spot welding
- ☐ stapling vs. screws or bolts
- ☐ stapling vs. glue or cement
- ☐ stapling vs. tape
- ☐ stapling vs. tacks or nails
- ☐ stapling vs. solder
- ☐ stapling vs. wire or string

PACKAGING AND CARDING

- ☐ sealing bags (cloth, paper or plastic)

- ☐ mounting products on display cards
- ☐ fastening items to individual cards

SHIPPING ROOM ECONOMIES

- ☐ preparing cartons for filling
- ☐ sealing filled cartons
- ☐ lining or padding crates
- ☐ applying shipping bills or tags

BUILDING APPLICATIONS

- ☐ applying asphalt roofing

- ☐ laying underfelt
- ☐ installing ceiling tile
- ☐ applying insulation
- ☐ installing low-voltage wiring
- ☐ applying shake shingle siding

OFFICE EFFICIENCIES

- ☐ filing
- ☐ routing
- ☐ posting
- ☐ binding folders and reports
- ☐ preparing advertising dummies

Name _____ Position _____

Company _____

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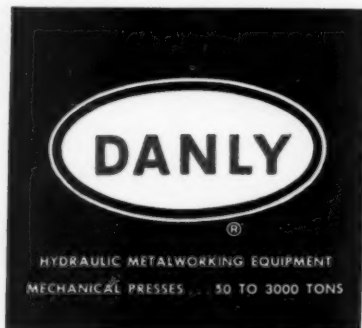
wanted:

The installation of a new Danly Press in any press line can produce exceptional cost-cutting results. This fact has been proved in the production records of leading stamping shops throughout the country. But when you count pieces at the end of a shift, it's the efficiency of the *whole* line that really counts. That's why production chiefs are specifying *complete lines* of new Danly Presses.

Running together as an integrated production unit, Danly Presses turn out more finished stampings per shift—at lower cost and with fewer line shutdowns. This is the kind of performance *you* can expect from Danly Presses. The reasons for it are many: Danly's heavier, more rugged construction gives the reserve strength necessary to meet the demands of continuous peak-load line operation. Automatic oil lubrication saves hundreds of hours of press maintenance. Exclusive electrical and pneumatic control devices permit convenient automation adaptability and increased safety. Danly's cooler running clutch and brake wear longer, need less replacement. From blanking to finished stamping, every Danly Press delivers more work per shift. Write to Danly today . . . experienced press engineers will be glad to discuss your specific stamping problems.

DANLY MACHINE SPECIALTIES, INC.

2100 South Laramie Avenue, Chicago 50, Illinois



It costs less to run a DANLY PRESS line!

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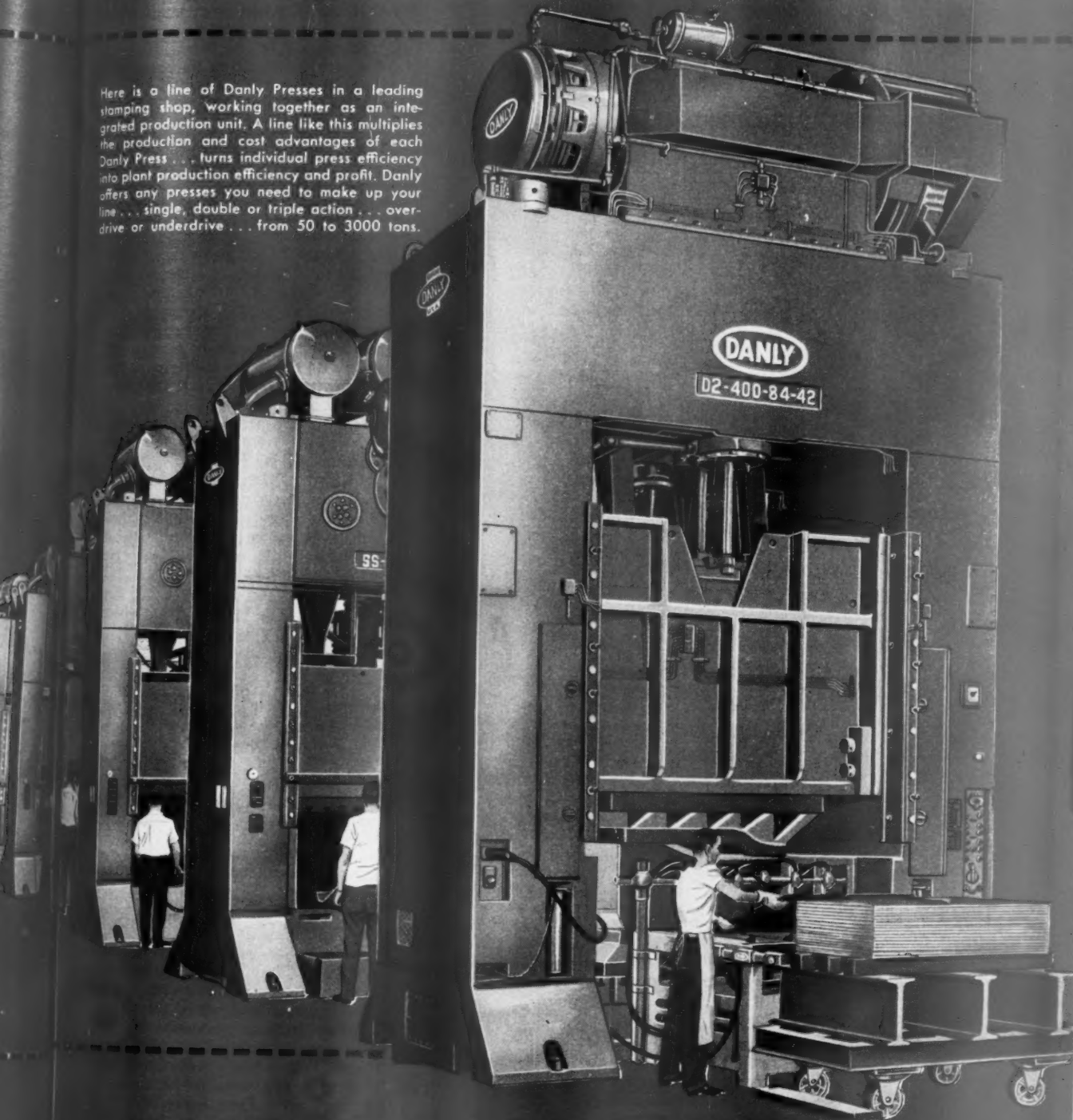
lower

COMPLETE



Low cost stamping output

Here is a line of Danly Presses in a leading stamping shop, working together as an integrated production unit. A line like this multiplies the production and cost advantages of each Danly Press . . . turns individual press efficiency into plant production efficiency and profit. Danly offers any presses you need to make up your line . . . single, double or triple action . . . over-drive or underdrive . . . from 50 to 3000 tons.



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When fog or other hazards of the sea threaten the safety of your ocean cargo investments, marine insurance written through the Marine Office of America is your greatest security.

For Marine Office protection is built upon know-how gained through decades of experience—upon financial strength that is unsurpassed—upon world-wide facilities for the prompt settlement of all just claims.

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boiling if it could—on the general theory that some issues make more votes if kept stirred up rather than decided.

Eisenhower's team has pretty much fixed things so that the pipeline of authority and action is intact and in good working order. If they can help it, nothing will be lost or side-tracked, either accidentally or on purpose.

• **The Pentagon**—Probably the best single example of this—though it went largely unnoticed—came during the reorganization of the Pentagon when the Secretary of Defense was given his "nine vice-presidents," the Assistant Secretaries. As part of this reorganization, which Congress adopted, the President directed that decisions of the Joint Chiefs of Staff go to the services through the Secretary of Defense. This had the effect of making the Joint Chiefs in fact a staff agency of the Secretary. Previous Secretaries had found that they frequently were powerless, that the statutory authority of the Chiefs themselves was such that they could act and pass along decisions to their subordinates and cut the Secretary in later merely as a matter of information.

This sort of thing is over, as far as Eisenhower and his businessman administrators are concerned. If their manner of running the government has distinguishing characteristics, they are probably these two:

• They're the kind of men who want to decide things; their whole business upbringing conditions them to that kind of thinking.

• They are insistent on follow-through—once a decision has been made, or a policy spelled out, they make it their business to see that underlings do what they're told to do.

In general, they think this is good politics. Certainly, Eisenhower himself operates on this theory. And he has every reason to believe that this style of running the government may account for the continued high state of his own popularity. He has said many times that his way is the only way the GOP can stay in power.

Good politics or no, the old hands in Washington—the civil-servants who have seen Administrations come and go—rather admire the efficiency in the White House, even when they don't like the decisions produced by the shiny new machinery.

• **Acid Test**—There's still a tendency to rate the new men, for all their experience and organizing ability, as amateurs who still lack the finesse and zest and skill with which the Democrats play the game of politics. That idea will have to be tested against one well-accepted Washington guidepost: A politician is a professional if he has won two elections in a row.

Back to School

Income tax kit for teaching the young also serves to guide business people in the law's vagaries.

The men who head tax departments in a thousand U.S. businesses—members of the Tax Executives Institute—got a call for help last month from a former associate and an old friend. T. Coleman Andrews, Commissioner of Internal Revenue, besought them to help present a new tax instruction course prepared by the Internal Revenue Service for high school pupils.

The experts are ready to do that whenever school officials invite them. But—after taking a quick look at the material—some are going further. They are getting the IRS school tax kit themselves, and will use it to instruct business executives and employees.

"I took one kit to show to our board of directors and never got it out of the room," the head of one tax department told IRS officials.

• **A Career**—The 1955 school tax kit is something new. For a couple of years, IRS supplied schools with a simple tax study unit geared to the problems of a teenager with a part-time job. This year for the first time, the kit prepares pupils for a lifetime of tax paying.

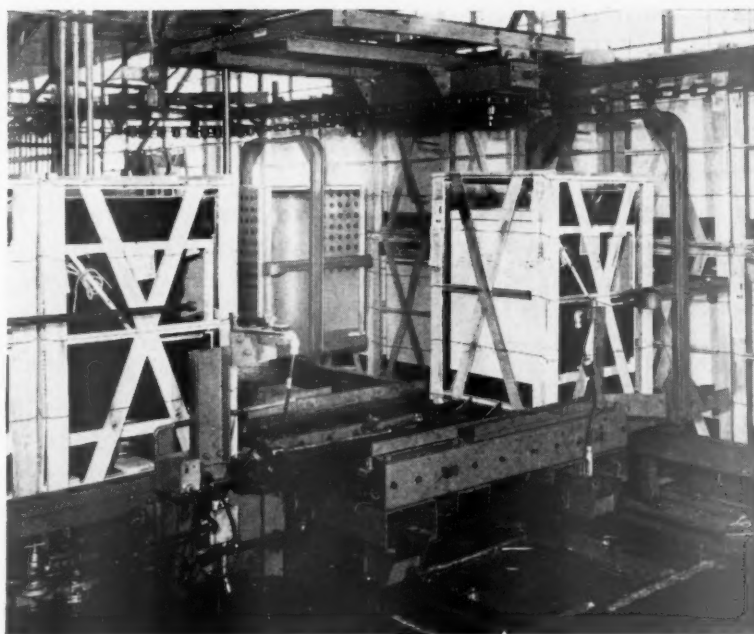
The course still starts with a teenage taxpayer and shows how he can get a refund of payroll taxes withheld if he makes less than \$600.

In the next step, the youth has acquired a wife, a child, a job as office manager of the "B-C-D company," and a salary of \$4,500. The problem posed appeals to taxpayers everywhere: What is the lowest possible tax under the new Revenue Act? The kit teaches how to take full advantage of every deduction.

The final step takes the tax-wise hero to the top of the heap as president of B-C-D, with two children, a whopping mortgage, a \$24,000 salary, a \$1,500 bonus, dividends of \$1,200 from his own stock and \$500 from stock owned by his wife. He's a generous donor to good causes, has substantial medical costs, and other deductible items.

Tax officials are surprised at the skill shown by students in working these problems. The returns they prepare in class have only two mistakes per 100, compared to a national average for adults of 25 mistakes per 100.

• **Self-Defense**—Tax executives are taking the material into private business partly in self-defense. This year's forms are longer and more complex than ever, because of the new deductions voted last year.



AUTOMATIC TRANSFER

from assembly line to moving delivery line

The overhead conveyor shown above picks up crated appliances from multiple assembly lines and delivers them to storage and shipping. Transfer of the crated machines from assembly line to delivery conveyor is completely automatic.

The transfer device was conceived, engineered and built by Mechanical Handling Systems. Limit switches discover an approaching empty carrier on the overhead conveyor, activate the transfer carriage which accepts a crated appliance and moves it sideways at the overhead conveyor speed and forward onto the empty carrier.

This is another example of automatic handling developed by MHS to cut costs, to speed production and to protect the product from damage. *It is successful automation.*

We will apply this same sort of practical ingenuity and resourceful production engineering to the problems in your plant. A call for the MHS engineer puts this outstanding organization at your service.

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MANAGEMENT

The Fable of the President and the Accountant

Once upon a time a company was losing money. Although its plant had a normal capacity of 30,000 widgets it was selling only 10,000 a year, and its operating figures looked like this: ➡

Price per unit	\$ 1.00
Total fixed cost	\$ 6,000.00
Fixed cost per unit	.60
Variable cost per unit	.65
Total unit cost	\$ 1.25
Total manufacturing cost	\$12,500.
Value of closing inventory	0.
Cost of goods sold	\$12,500.
Sales income	\$10,000.
Operating loss	\$ 2,500.

Then one day a bearded stranger came to the board of directors and said: "Make me president, pay me half of any operating profit I produce, and I'll put you on easy street."

"Done," they said.

So the bearded stranger set the factory running full tilt, making 30,000 widgets a year. So his figures looked like this: ➡

Total fixed cost	\$ 6,000.
Fixed cost per unit	.20
Variable unit cost	.65
Total unit cost	.85
Total manufacturing cost	\$25,500.
Value of closing inventory	\$17,000.
Cost of goods sold	\$ 8,500.
Sales income	\$10,000.
Operating profit	\$ 1,500.

"Pay me," said the bearded stranger. "But we're going broke," said the directors.

"So what?" said the stranger. "You can read the figures, can't you?"

But just as everything seemed lost, an accountant in shining armor charged into the room. "Hold," he cried. "I have just changed to the system called DIRECT COSTING. We only distribute variable costs. So now the figures look like this: ➡

Variable cost per unit	\$.65
Cost of manufacturing 30,000 units	\$19,500.
Value of closing inventory	\$13,000.
Variable cost of goods sold	\$ 6,500.
Sales income	\$10,000.
Marginal income (here's where the trick comes in — I'll explain later)	\$ 3,500.
Total fixed costs	\$ 6,000.
Operating loss	\$ 2,500.

So the bearded stranger was foiled and the directors are back looking for a way to make a profit — and to sell off the inventory the stranger left them with.

©BUSINESS WEEK

A Better Yardstick for Costs?

The fable above is one that accountants tell to amuse one another after hours. But it has a point that an increasing number of businessmen are beginning to appreciate. It illustrates some of the problems when you try to assign costs and value inventories.

G. J. Barry, comptroller of Continental Can Co., describes one of these real-life difficulties this way:

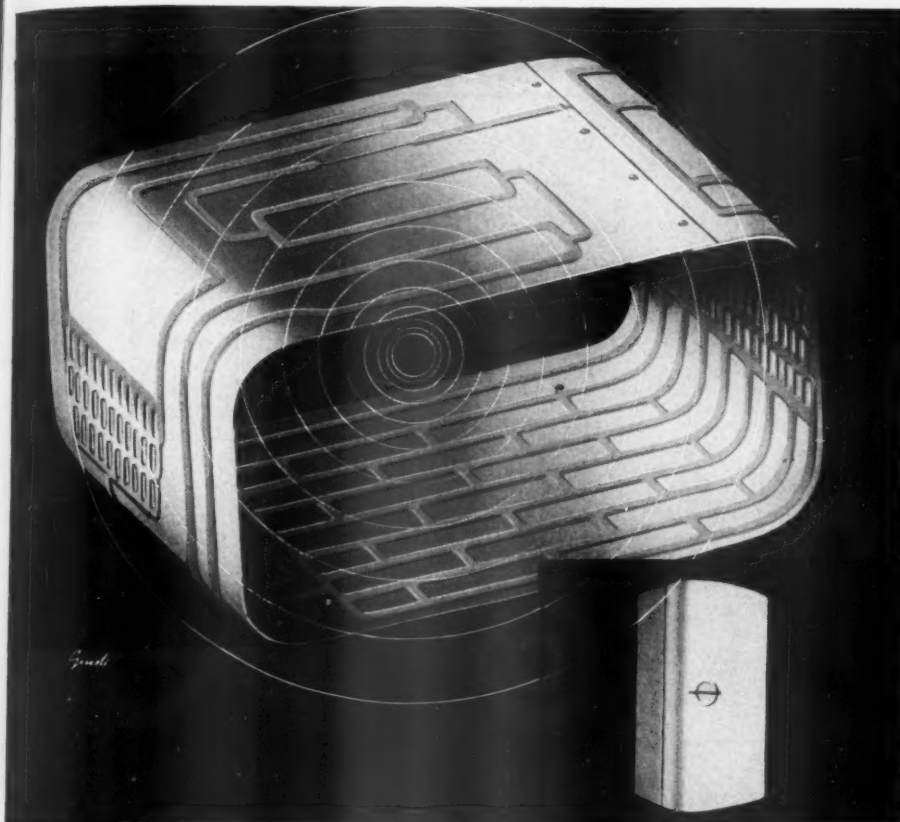
"We encountered instances where the amount of the monthly profit actually exceeded the amount of the month's sales. . . . An accounting system that produced a profit in excess of sales just didn't make sense to our operating executives."

Both the fable and the real-life story of Continental Can's internal affairs point up the differences between (1)

conventional—or "absorption" accounting—methods of figuring production costs, inventory values, and profit margins; and (2) what has come to be known as direct costing.

Either case can be used by accountants to convince businessmen that direct costing sometimes will give operating executives a truer measure of the things they want to know. So far, proponents

Western pioneers a **REVOLUTIONARY CONCEPT** in Metal Technology



Complete Flexibility. Any pattern of tubing—any manufacturing design that can be drawn on paper—can now be produced simply and easily inside perfectly bonded metal sheets. Dimensions of tubing can be fixed as desired.



Automatically Leakproof. Pattern channels must be leakproof or the Roll-Bond Sheet cannot be made. Production mechanics prevent a leaking sheet from reaching completion. Western Roll-Bond guarantees no leaks!



Die and Press Costs Eliminated. A complete redesign of any tubing pattern costs less than \$50, not \$50,000—is completed in days, not months. Traditional ideas of manufacturing costs are shattered completely.

The patented **Roll-Bond** Process gives new flexibility of design and manufacture to makers of heat exchanger products

First exhibited at the National Association of Purchasing Agents Show last May, the Western Roll-Bond Process has unlimited potential. Today, refrigeration—tomorrow, roll-bonding will be found in air conditioning units, radiators, home and industrial heating and power plants. The application of Western roll-bonding to the field of structural design in the aircraft, construction, automotive and other industries may change the face and the future of America.

One of America's leading refrigerator manufacturers has designed his 1955 line to take advantage of this Western roll-bonding process for his evaporators. Already in production, he has

freed himself of high die costs—ended all problems of leakage in a single stroke. Complete flexibility of internal tubing design is now possible with this new process. At this moment, nearly every major manufacturer in the refrigeration field is testing experimental patterns that utilize the new process that has eliminated one of the major technical problems of an industry.

Now—right now—is the time to examine the potential applications of Western roll-bonding in your own business. Available in aluminum, and soon to become available in copper and copper base alloys, Western Roll-Bond may mean you can make your product more easily and more economically very, very soon.

Free! Actual Sample of Western Roll-Bond Process Metal Management, Engineering and Production men frequently ask for an actual piece of Western Roll-Bond Process Metal. Western Metals will be happy to supply samples on request. Write to Roll-Bond Process, Western Brass, Dept. B, East Alton, Ill.

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**'For superior toilet tissue
at economical cost, get
FORT HOWARD
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Without crystal gazing any Fort Howard distributor salesman can show you that the finest grades of Fort Howard tissue cost as little as 7c more per hundred users than a run-of-the-mill brand . . . and pay you big dividends in softness, gentle absorbency, comfort and user satisfaction.

Among the 18 grades and folds of quality-controlled tissue produced by Fort Howard there is sure to be one that meets your requirements exactly. Call your Fort Howard distributor salesman today!



FORT HOWARD PAPER COMPANY, GREEN BAY, WISCONSIN

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Toilet Tissue and Paper Napkins*



of direct costing are in the minority, but they foresee the day when—in some industries, at least—it will replace conventional accounting both for reporting inside a company and for tax and stockholder statements.

• **Major Difference**—If you examine the figures in the fable, one thing stands out as a major difference in the two systems: the value you place on inventory. In direct costing, that value is considerably lower. Therefore, direct costing gives a more conservative estimate of how much money you are making when inventories are involved. But that, direct costing backers say, doesn't begin to explain what they consider the major advantages of the newer accounting method.

• **Conventional**—Essentially, the two systems part company in the way fixed costs are handled. It works like this:

The cost of any product breaks down into two main categories. First are the variable costs—such as labor and raw material—that change with the volume of production. Second are the fixed costs—property taxes, depreciation, interest, some maintenance—that remain the same regardless of production.

Under conventional cost accounting, you determine the cost of goods sold (and the cost of inventories) by applying both variable and fixed costs to your volume. To do this you estimate the total cost per unit and multiply by the number of units produced.

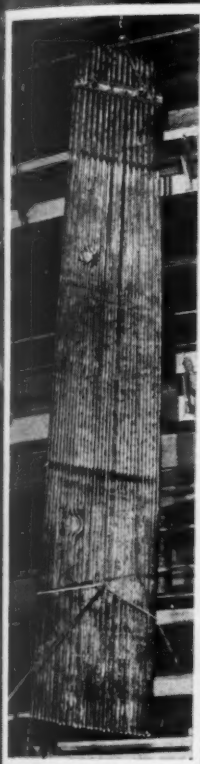
The trouble starts when you try to get a figure that fairly represents cost per unit. You can find the variable cost per unit without much trouble, because it doesn't change with levels of production. But fixed cost per unit will be smaller when production is high, and it will rise as production falls off. Since you have to have a definite figure to work with, what you usually do is assume a normal (or standard) volume, then divide that volume into the total fixed costs. That gives you a fixed cost per unit. Adding that to the variable cost per unit gives you a total.

But when you use that estimate of cost per unit to assign costs or value inventories you will find that you check out only if production matches the assumed normal. If you produce at a higher rate, you will be allowing for more fixed cost than you actually incur (over-absorption). If you produce at a rate below standard, actual fixed cost will be bigger than you allow.

• **Newer Method**—Direct costing, as the name implies, charges to the cost of goods sold only the variable costs—those changing directly with volume. It treats fixed costs as a charge against total sales income, rather than as a cost assigned to particular products.

So long as a company sells all it makes during a particular accounting period, the difference in the way fixed

now we're "prefabbing" big boilers!



A big power boiler is a tremendous project. It takes at least a year to design and fabricate its mountain of parts . . . and about another year to put them all together at the plant site.

A particularly difficult part of erection is piecing together the vast jig-saw puzzle of many miles of tubing, which reach the plant site in thousands of separate pieces. Finding the right piece for each separate location at times becomes sort of a gigantic treasure hunt.

But now Combustion has streamlined the field erection of boilers by developing special machines and methods which make it possible to *prefabricate* large panels of tubing in C-E shops. This development means faster loading and unloading . . . less damage in transit . . . easier and more compact storing at plant site . . . no needle-in-a-haystack process of locating tubes . . . and, most important of all, *substantial reductions in time and cost of erection.*

This advance in the technique of building big boilers is one of a number of current Combustion developments which add to the values built into *all* C-E Boilers, regardless of size. You can gain the advantages of these "plus values" by selecting your next boiler from the C-E line which includes a type and size just right for your steam needs.

Looking up through the furnace of a 13-story high C-E Boiler, showing panels of tubing in place on most of one wall and on part of another. Insert shows one panel being hoisted into position.

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costs are handled amounts simply to an internal or bookkeeping affair. In either case, its net operating profit comes out the same.

• **The Difference**—What's important, however, is that the books will look different. That difference, direct costing proponents say, is important.

Take the figures from the table, where variable costs are 65¢ a unit. Fixed costs total \$6,000 at normal production of 30,000 units (making fixed costs 20¢ a unit). Here's how the two sets of books might shape up:

	Conventional	Direct
Sales	\$30,000	\$30,000
Mfg. cost	25,500	19,500
Opening inventory
Cost of goods available	25,500	19,500
Deduct closing inventory
Cost of goods sold ...	25,500	19,500
Marginal income	10,500
Fixed costs	6,000
Net operating profit ..	4,500	4,500

• **Gain**—In this case, one item emerges out of direct costing that doesn't appear on the orthodox system: a marginal income figure. This, accountants say, allows management to figure quickly what any one product is contributing toward fixed charges and profits. Marginal income figures make it clear that any product, as long as the income from it covers the variable manufacturing costs, helps pay a company's fixed charges. In orthodox accounting, it's possible to show a product losing money—because its cost includes fixed charges—even though it pays its way.

That clear picture of a product's value can be a signal to management for a number of things: where to push sales, what products might be dropped, where added volume will pay.

Conventional accounting can get the same figure, but it has to be broken out of the accounting statement. Therefore, it isn't quickly apparent to operating executives what a change in volume will do to profits.

Direct costing makes that pop right out of the figures. If your variable costs are 65¢, your marginal income is 35¢—or a 35% profit. If you double production from 30,000 to 60,000 units, your marginal income goes from \$10,500 to \$21,000—and you can subtract your fixed costs to get a new net of \$15,000.

• **Advantages**—Along with crystallizing the marginal income figure, direct costing has some other advantages:

• **Direct costing** demands a separation of the two kinds of costs. While this is usually done even in conventional methods, it isn't absolutely necessary.

• **By handling fixed costs** in total, a direct costing statement gives a preview of how a change in fixed costs would affect profits.

• A price change can be applied quickly to an operating statement to show what happens to profits.

• **Management** gets a running description of its breakeven point.

• **Management** has a more accurate yardstick of production performance, uncluttered by allocations of costs that aren't under the control of the operating men in the plant.

• **Parting of the Ways**—On these scores, there's not much argument among accountants. The real difference starts when—as in the case of the table—inventories have to be taken into account. That's when accounting enters the field of policymaking.

Anyway you figure them, inventory values are pretty arbitrary. For instance, some small businesses place no value on them at all—they operate on a cash basis. If they make 20 widgets and sell 10, they don't show the 10 that are left over as an asset.

Actually, if a business wanted to—and if the public accountants, tax authorities, and stockholders would permit—it could value its inventory at zero. Over the years, in fact, there have been changes in the way inventories are valued. During the 1920s, the most common method was to set the value at the market price. That seemed to make sense, accountants reasoned, since management wouldn't have manufactured the goods if it hadn't expected to sell at the going price.

But the precipitous decline in prices during the 1920 depression caused such a heavy inventory write-off that accountants shifted to the more conservative estimating of inventory values used today. Now most inventories are valued at cost or market—whichever is lower.

• **Opposition**—If management should shift to direct costing, there would be an even more conservative inventory valuation because you reckon the value as including only variable costs.

Here's where many public accountants disagree with direct costing. The costs—hence the inventory value—of any product, they say, should include everything. Separating variable and fixed costs can be arbitrary—for instance, how do you treat Social Security taxes—and so, if you use only one part of these costs for valuing inventory, it may give a distorted picture.

Then there's the real problem of taxes. Would the Internal Revenue Service accept the arbitrary writedown of inventories—on which taxable profits are figured—that direct costing creates?

A survey made by the National Assn. of Cost Accountants a couple of years ago showed that 18 major companies are using direct costing—including Abbott Laboratories, Armstrong Cork Co., Pittsburgh Plate Glass Co. But so far, the majority have confined its use to internal operating reports.

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Why Granite City Steel is growing 3 times faster than the industry!

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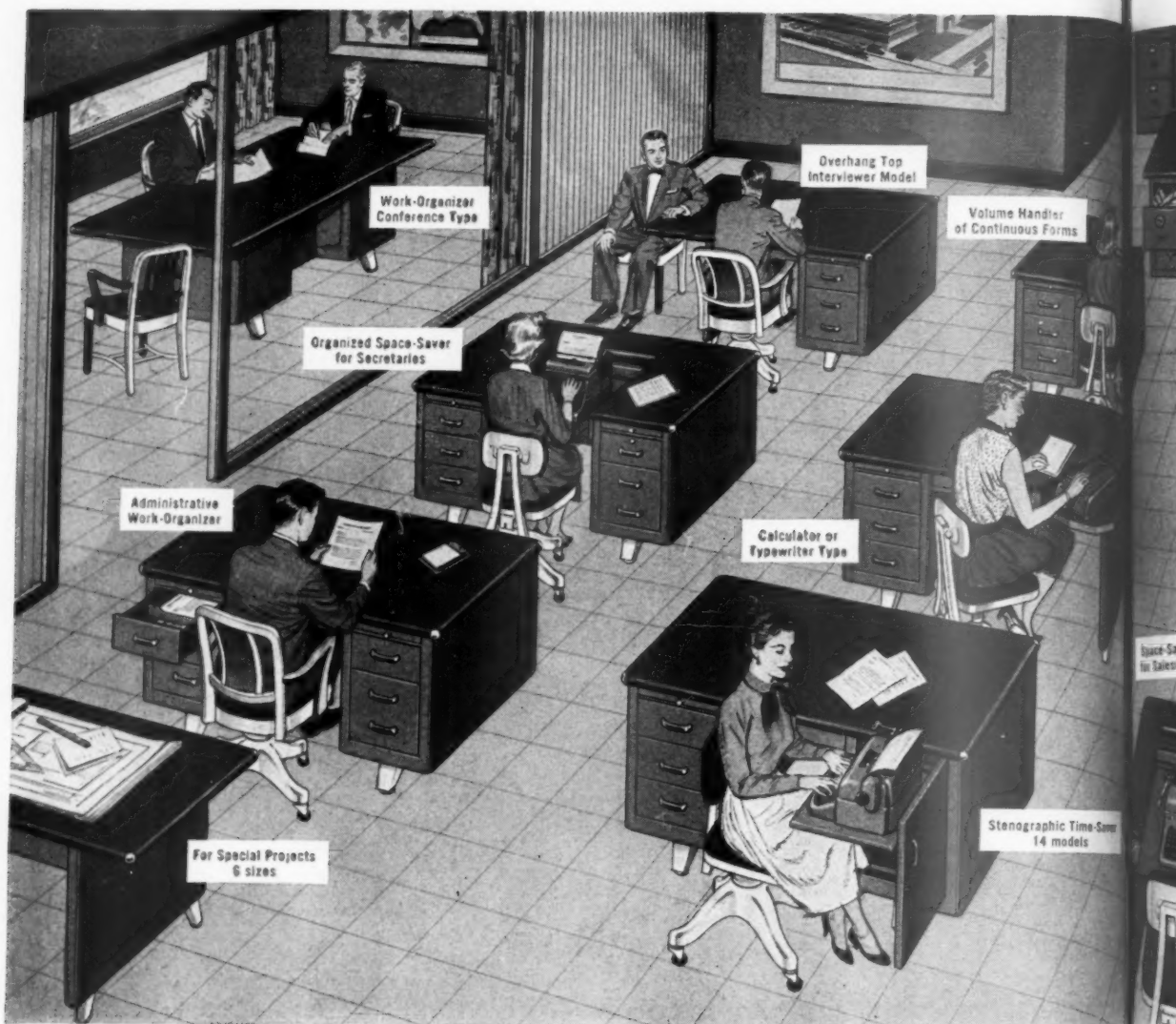
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IN BUSINESS today time is the critical factor. Never before in the history of American business has the handling of detail been so important a problem.

In the process of organizing and handling this multiplicity of detail there are consequential savings to be made. Efficiency here makes for economy. The savings from economy go entirely and directly to profits—a

small percentage, perhaps, of sales, but often a considerable percentage of profits.

But even more important, the efficient use of these tools does two things: It makes possible an orderly flow of information essential to management in meeting the changing problems of our times and frees more time of management to manage.

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There's a specific place for everything in the "time-engineered" Shaw-Walker desk. Pictures show contrast with confused clutter and work-wasting space of any other type and make of desk.

New stylized line! Now 76 models.

FOR THE EXECUTIVE—MORE TIME TO MANAGE



Working behind the comfort and convenience of a Shaw-Walker "time-engineered" desk, the busy executive gets more done, with less strain, has a clear, relaxed mind and body to devote to management.

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THE BOOKLET, "TIME AND OFFICE WORK" is packed with ideas for stretching office time. A wealth of information on "time-engineered" office systems and equipment. 36 pages! Many color illustrations! Write today on business letterhead to: Shaw-Walker, Muskegon 17, Michigan.



SHAW-WALKER

Largest Exclusive Makers of Office Furniture and Filing Equipment in the World
Executive Offices at Muskegon, Michigan—Branches and Exclusive Dealers in All Principal Cities

KNIGHT-ERRANT is the role Cyrus S. Eaton got to play when he arrived at Follansbee, W. Va. He had bought a steel mill, the town's only major industry, when it was about to close down. The town was celebrating.



SCHOOL CHILDREN get the day off to greet the man who had saved the town.

A Small Town Greet the Man W



THE BAND WAS OUT when Eaton arrived, struck up "Happy Days Are Here Again" as he was formally welcomed.



STEELWORKERS, who spent months in fear of losing only source of employment, had a chance to greet new owner.



STANDING OVATION met Eaton when he entered the plant. Space had been cleared for a victory banquet.

Who Helped Save Its Jobs



REVELRY was the order of the day at the banquet, at which Eaton was guest of honor. Four church groups and the high school band mothers prepared the meal.

It isn't often that a businessman gets to play the role of a knight-errant. But last week, from the minute he arrived at the plant gates of Follansbee (W. Va.) Steel Corp. until he was escorted back to his sickbed in a nearby hotel, Cyrus S. Eaton was just that in the eyes of 1,200 exuberant townspeople.

They had turned out for a victory banquet to celebrate—with Eaton as guest of honor—the fact that their steel mill is staying put. For years, it has been the only major industry in this Ohio River town. Eaton helped keep it from packing up and leaving.

• **Shock**—The town itself carries the name of the old owning family. Citizens as well as employees were shocked into action when they learned that the Follansbees and other owners were selling the mill to Frederick W. Richmond, head of a New York syndicate. He, in turn, planned to sell the mill's equipment to Republic Steel Corp., which then would ship it to Gadsden,



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NATIONAL CAR RENTAL SYSTEM

Why wait for public transportation when "your car" can be waiting for you? Any NATIONAL member, in all principal cities here and abroad, will reserve a car at your destination... a clean, late model that you'll drive proudly, conveniently... economically.

Look in the yellow pages of your phone directory. Write for a National Courtesy Card to:



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PRINT hundreds of FAST,
CLEAN PERFECT COPIES

... IN 1 TO 5 COLORS, IN MINUTES

Now, you can make 120 or more copies per minute of anything up to 9 x 14 inches in size — typed, written, drawn, traced or ruled — in 1 to 5 colors. All in one easy, inexpensive operation. The Heyer Conquerors, Manual and Electrically Operated, are the duplicators with ALL the features... priced much lower than comparable machines.

Model 70-Hand Operated—\$195 (plus tax)
Model 76-Automatic Electric—\$325 (plus tax)

Write today for FREE descriptive literature and name of your nearest dealer—to:

THE HEYER CORPORATION
1823 S. Kostner Ave., Chicago 23, Ill.

"... school was let out; the band greeted Eaton; the governor showed up; women's auxiliaries prepared a country-style banquet..."

FOLLANSBEE starts on p. 110

Ala., to round out its facilities there.

The mill has been a marginal operation. It finishes from hot-rolled coils, bought from others, cold-rolled products. The 1954 steel slump hit it hard, and prospects for saving it grew dim. Then a citizens' committee carried the issue to court, got Richmond's deal blocked, and began looking for ways to keep the Follansbee mill operating.

Eaton came to their rescue. The Cleveland industrialist and financier, chairman of the Chesapeake & Ohio Ry., agreed to buy the mill from Richmond.

He promised to keep it operating and, if he could, turn it into a profitable business (BW—Dec. 11 '54, p. 26)—to the huge joy of 4,500 townspeople and the mill's 700 employees.

As the deal finally wound up:

- Eaton and his associates got the mill.

- Richmond, who says he took a million-dollar cut when he agreed to sell to Eaton rather than Republic Steel, got some warehouses that Eaton didn't want.

- Follansbee Steel Corp.'s corporate shell was merged into two companies controlled by Clint Murchison, Texas millionaire. He wanted the corporation's New York Stock Exchange listing.

- The town got to keep practically the only place there is to work.

- Festivities—Last week's celebration, arranged by the citizens' committee headed by Mayor Frank Basil, was a whole-hearted affair. School was let out; the high school band greeted Eaton on his arrival; the governor of West Virginia (along with Sen. Estes Kefauver of Tennessee) showed up; women's auxiliaries of the four leading churches worked a day and a half preparing a country-style banquet. The 1,200 who attended paid a \$1 for a \$4 meal—the rest of the tab being picked up by local businessmen.

Eaton couldn't attend the full banquet. He had a high fever. His personal physician figured he might be coming down with mumps caught while spending a two-week Canadian skiing vacation with his grandchildren. Other dignitaries were politely applauded. But when Eaton strode into the specially laid-out banquet in the plant, the townsfolk jumped to their feet with a roar of welcome.

One other visitor came close to getting the kind of welcome reserved for Eaton. Mrs. Aline Warner of Green-

wich, Conn., wife of a New York City broker, was there by special invitation. She had entered the wrangling over the property with an offer to save the mill when it appeared it would be sold out from under the town. She bowed out when Eaton moved in.

- Troubles—There was at least one less harmonious note. Eaton brought with him Louis Berkman, an associate in the Follansbee purchase who is president of the newly formed company, Follansbee Steel Mill. Townspeople wonder about Berkman's role, since he has a record of liquidating some mills. He had raised a rumpus by writing a letter to supervisors announcing that their bonus and incentive system was being junked. Berkman had to make a personal plea to veteran supervisors to stay on the job until the company gets on its feet.

That's going to take some doing. One problem is a source of supply of the semi-finished steel Follansbee uses for raw material. The mill has been getting some from Republic, which started shipping coils when it seemed likely that it would soon own the plant.

But Eaton told townspeople he would make certain there would be supplies for the mill. Berkman and the man he selects for operating head will buy where material is cheapest, knowing that in a pinch he can count on Detroit Steel Corp.'s Portsmouth (Ohio) works. Eaton has a 25% financial interest in Detroit Steel—along with interests in five other firms, including Republic.

The mill already is making plans for a river dock where coils can be unloaded from barges coming up the Ohio River from Portsmouth.

- Sales—Then there is the problem of sales. Right now the mill is on a hand-to-mouth basis. It has been converting some semi-finished steel for Empire Steel at Mansfield, Ohio, and Newport Steel at Newport, Ky.; but those companies eventually will have cold-rolling facilities of their own.

What Follansbee really needs is a market among steel users. During the past five months, it has lost most of its former customers.

What about the future? Some steel industry people think Eaton's next move will show his real motive. They figure Follansbee is just one piece of a jigsaw puzzle that will emerge as a gigantic steel operation, rivaling the biggest.

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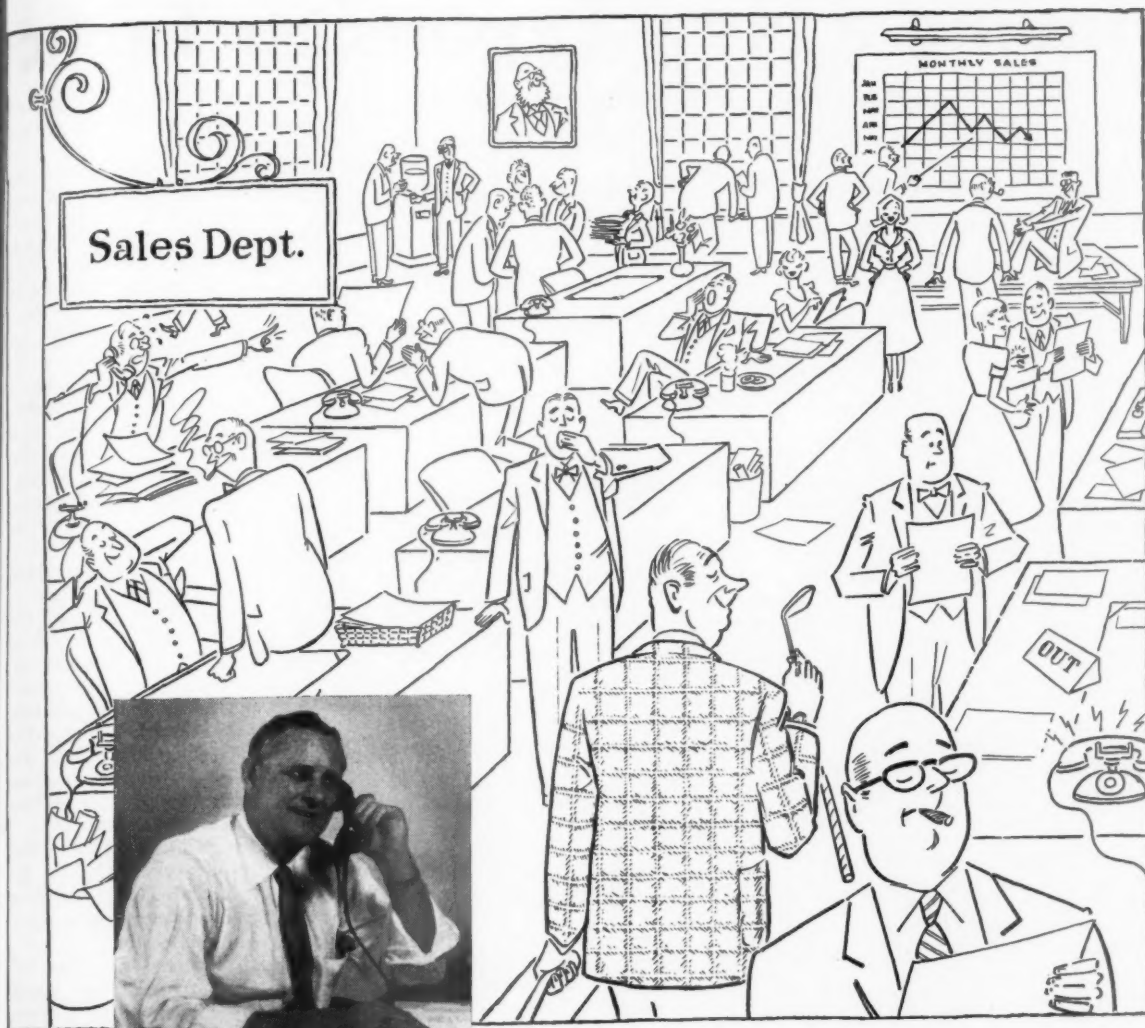
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You call **ONE MAN** . . . not a "bored meeting" when you order Bristol Brass

YOU don't have to "go down the line" . . . and back over it again and again . . . when you do business with Bristol. You deal with one man all the way . . . one man who has both the mill experience and sales know-how to speed your order straight through. You won't get the "I don't know but I'll ask someone who does and have him call you back" treatment. Whoever talks to you at Bristol has the full authority and responsibility to get your Brass to you quickest way. Nor does he have to be a vice president!

And once your specifications are set in the mill, your interests are protected by the personal interest which Bristol mill men will take in your orders. You're not an order number . . . you're a recognized individual . . . and we're not too big to forget it.

And now . . . **BRASS FORGINGS, too . . .**
The Bristol Brass Corporation announces the acquisition of
Accurate Brass Company, 73rd Ave. & 88th St., Brooklyn 27, N.Y.

"How do you know it can't be forged?"

So all you have to do when you call Bristol (Connecticut) Ludlow 3-9246 is simply to say: "I want to place an order". And the next voice you hear will be that of the man who'll take it from there to your receiving department.

The **BRISTOL BRASS CORPORATION** has been making Brass strip, rod and wire here in Bristol, Connecticut since 1850, and has offices and warehouses in Albany, Boston, Buffalo, Chicago, Cleveland, Detroit, Milwaukee, New York, Philadelphia, Providence, Rochester, Syracuse. The Bristol Brass Corporation of California, 1217 East 6th St., Los Angeles 21. The Bristol Brass Corporation of Ohio, 1607 Broadway, Dayton.

"Bristol-Fashion"
means Brass at its Best

Finding a New Expansion Tactic

- Chesapeake Industries is soon losing tax cushion that gave easy way to buy up money-making companies.
- Its current deal to take over Colonial Trust is tip-off on CI's new tactic for profitable expansion.
- CI sees Washington opening up foreign investment market and is getting set to jump in fast.

Ever since William C. MacMillen, Jr. took over the top job in Chesapeake Industries, Inc. in 1951 he has been up to his neck in the hot market for businesses (BW—Oct.30'54,p154).

On Dec. 28, Chesapeake added a new member to its family of seven widely diversified subsidiaries by acquiring Colonial Trust Co., a New York commercial bank with assets of some \$68-million. Colonial brings to the deal four subsidiaries—three investment companies, an operating oil company.

By picking up Colonial, CI management signaled a change in direction:

- Under MacMillen, CI has been getting its subsidiaries by paying for them outright either in cash or out of their earnings. The Colonial deal is different. It was an exchange of stock.

- All of CI's acquisitions since 1951 have been of companies selling their products in the domestic market. With Colonial, CI gets a group of experts on the foreign market.

Although it is much like any other commercial bank, Colonial has put heavy accent for a bank of its size on its foreign department. Some 300 foreign banks have deposits with Colonial. It offers to them credit facilities—and gets an up-to-date view of what's going on abroad.

To get Colonial, CI's shareowners had to authorize a new issue of Chesapeake common and preferred stock—some \$5-million worth. The share holders of Colonial and its subsidiaries are now getting this new stock in exchange for their holdings.

- **What It Means**—The reasons for getting Colonial are more significant than the method of its acquisition.

- The handy tax-loss position that CI has been using to get new businesses by paying for them out of their earnings will be used up at the end of this year.

- The deal means that CI will now look overseas for most of its expansion. CI's thinkers see a favorable change coming in Washington's outlook on foreign investment—a change that appears even more probable following Pres. Eisenhower's request to Congress this week for reduction of trade barriers (see page 30). Obviously, via

Colonial management's knowledge of the overseas market and their contacts in it, CI is getting set to get in—fast.

- **Framework**—Chesapeake (Pathe Industries, Inc., up to 1952) has been spun out of a Robert R. Young enterprise of the 1930s. Under Young rule, the company got into many enterprises—Pathe for one. Young doesn't take an active part in CI's management operations now. However, he and his wife own some 20% of CI's common and preferred stock—the largest single holding. Colonial's Pres. Arthur S. Kleeman and his wife own about 6% of both CI's common and preferred—and for three years he votes Young's shares for directors.

CI's combined operations last year, before Colonial came on the scene, grossed about \$20-million.

The misadventures of one enterprise—the former movie-making subsidiary Eagle-Lion Films—in 1948-50 gave CI a \$10-million tax-loss carryforward. With that, CI started a buying spree, and for the last few years its main line of management operations has been the acquisition of profitable, going businesses through this tax-loss shelter.

Under the present tax law, when a subsidiary loses money, the corporation of which it is a part can, for tax purposes, deduct this loss from the earnings of the profitable pieces of the organization—thus, if the loss is big enough, making the earnings tax-free. The loss can be applied to earnings in the two years before the deficit occurred, or for five years afterwards.

- **How It Works?**—That's how CI two years ago picked up one of its most promising subsidiaries—Virginia Metal Products, Inc., Orange, Va.—by making use of CI's tax position (BW—Dec. 27'52,p86). The company is second largest maker of steel partitions, doors, and bookshelves, and has developed an automatic selector conveyor.

MacMillen checked the company, found it a good operation, OK'd the deal. In the first year under the CI umbrella, Virginia Metal made a half-million dollars before taxes. Because of the parent corporation's tax-loss carryforward, it could keep all of this. From

the gross earnings, MacMillen paid the sellers an installment on the purchase price, plowed back the rest.

- **Change**—But, after one or two more acquisitions, CI will now have to do its company buying without this tax-loss protection. That's why the change in CI's scope is called for.

MacMillen set the stage for this by putting CI through a vigorous shakeout at the end of last year. Three laggard subsidiaries were dropped.

- **Setup**—To the outsider, CI looks a lot like a holding company. MacMillen argues that this isn't a good tag to tie onto the CI package, however. Unlike the usual holding company setup, eight of CI's nine subsidiaries are wholly owned. Only Colonial is an exception—at least for the present.

Here's the way the subsidiaries look in CI's latest edition:

- **V. D. Anderson Co.**, Cleveland, purchased in 1945, a major manufacturer of heavy machinery for extracting vegetable and animal oil. It has designed gas and vapor purifiers and steam traps.

- **Allen D. Cardwell Electronics Productions, Inc.**, Plainville, Conn., purchased in 1953. It makes military weather-forecasting radar and four lines of civilian electronics equipment.

- **Pathe Laboratories, Inc.**, New York City and Hollywood. This big film processing laboratory, purchased in 1944, now offers Pathecolor as well as black-and-white processing.

- **Television Center, Inc.**, New York City, an 11-story building housing studios for filming movie and TV shows. It was bought in 1945.

- **Chesapeake Printing Corp.**, New York City, formed by CI in March, 1954, to handle special financial, legal, and corporation printing jobs.

- **National Transits, Inc.**, Philadelphia, purchased September, 1954, is one of the top card advertising outlets.

- **Colonial Trust Co.**, New York, the newest subsidiary.

- **Intercoast Petroleum Co., Inc.**, an operating oil producer with proven reserves in Texas and New Mexico worth \$1.5-million. Intercoast was one of Colonial's subsidiaries and so joined CI at the same time. (Three investment firms that also came with Colonial will be collapsed and their assets transferred to CI or distributed to shareowners.)

- **Virginia Metal Products, Inc.**, Orange, Va.

- **Preparing**—This year, CI's tax cushion is down to \$4-million. CI management has been reorganized to be ready for the time when the tax shield is gone.

MacMillen, one of Robert Young's bright young managers, is the president

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"DID THEY REALLY FIGHT FIRES WITH THESE?"

FIRE fighting equipment has been improved a lot. Education in methods of fire prevention is even more important in our progress.

In spite of advances made in fire prevention, it's still necessary to have adequate fire insurance protection.

It will pay you to know the current value of your property and possessions. Ask yourself this question: "Are my possessions protected up to at least 80% of current value?"

If you find you need more protection, Hardware Mutuals can write the additional insurance to make your program

adequate. There is no need to cancel your present insurance.

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Ask the full-time Hardware Mutuals representative near your home, or write Hardware Mutuals, for complete details about the Annual Pay Plan for 5-year term insurance on dwelling and contents. He will furnish complete details.

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20% dividend
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SAYS KING COTTON

The paper used in keeping records in your business is the least expensive part of the job. Yet having the right paper can materially increase accuracy and save hours of clerical costs. The 24-page free booklet illustrated above may help you these ways:

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(Please Print)

Organization
or Company.....

Street.....

City
or Town..... State.....

of CI in the present table of organization. Arthur S. Kleeman, who headed Colonial's enterprises, has been installed as CI board chairman. Six members of the Colonial team of foreign trade experts get CI director's posts.

CI plans to be in good shape to get on the foreign market quickly. MacMillen, with his remaining \$4-million backlog of unused tax-loss cushion is already dickering for U.S. companies with overseas potential.

• **Out of the Hole**—Financially, CI has pulled itself into fair shape. Of course, CI won't be able to handle the bank's assets as it might those of one of its manufacturing subsidiaries, but by getting Colonial aboard, CI's gross assets jumped overnight from \$21-million to about \$92-million. Beyond that MacMillen has cut a \$12-million debt in half since 1951.

When he took office, CI showed an accumulated deficit of \$3-million. CI started 1954 out of the hole—with a meager \$50,000 surplus—for the first time since MacMillen took the controls. That has now been upped to an \$8.5-million surplus by:

• Adding Colonial's \$5-million in net worth.

• Throwing in the pot last year's profits of more than \$1-million.

• Recapitalizing CI's 38,000 shares of preferred stock by shaving its value from \$100 par to \$10 par, a move that added \$3-million to capital surplus.

MANAGEMENT BRIEFS

Council: Cornell's School of Business and Public Administration has created a seven-man advisory group to help it in its experimental work on administrative science. Chosen are Chester I. Barnard, chairman, National Science Foundation; Lucius D. Clay, Continental Can chairman; Clarence Francis, ex-chairman of General Foods; Luther H. Gulick, New York City management expert; Pendleton Herring, Social Science Research Council; Elmer L. Lindseth, Cleveland Electric president; and James McConnell, Agriculture Dept. executive.

• **Kick back:** Since starting its college-aid program in 1953, Bethlehem Steel has mailed out checks totaling some \$321,000 to privately endowed educational institutions. Bethlehem sends \$3,000 to a school for each of its graduates accepted for the company's training program.

• **To combat charity rackets,** the Cleveland Chamber of Commerce is sponsoring for the second time a National Conference on Solicitations in Cleveland Mar. 24 and 25.

YOU PAY NO MORE THAN 59 CENTS PER HOUR

for this new Model C Autometric precision boring machine when put to work in your plant with...

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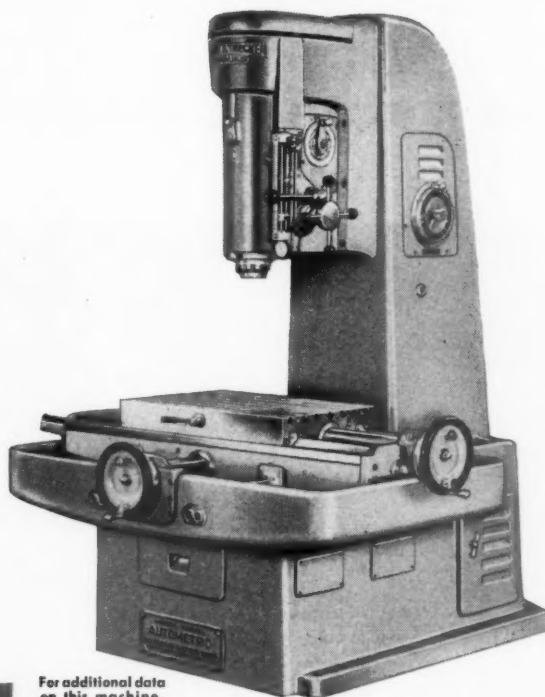
TOOL-LEASE PROGRAM

THINK of it! You can lease this new Model C Autometric boring machine for as little as 59 cents per hour! It's an exceptionally low price to pay for this modern, high precision-built boring machine, designed specifically for performing the most exacting operations in your toolroom, laboratory or shop.

Under Plan "A," one of three possible lease agreements, you make two semi-annual payments, totaling 25% of the machine's price during each of the first three years. And only 10% during each of the last four years. What's more, this lease agreement permits you to terminate or purchase your Model C Autometric at the end of the third year or at the end of any year thereafter.

Under Kearney & Trecker's Tool Lease program you can rent any of over 250 different types and sizes of standard milling machines or precision boring machines. All are available under three basic plans, with varying options to continue or terminate the lease, or to purchase the equipment. If you require special machinery or heavy-duty CSM bed types, special agreements will be considered.

For complete information on Tool-Lease, see your Kearney & Trecker representative or mail coupon to Kearney & Trecker Corp., 6784 W. National Avenue, Milwaukee 14, Wisconsin.



For additional data on this machine, see our catalog in Sweet's.

MACHINE TOOL OBsolescence IS BECOMING CRITICAL! WHERE DO YOU STAND?



Precision Mechanisms Industry—Includes machines for laboratory, scientific and engineering instruments; mechanical measuring, controlling instruments; optical, surgical, medical, dental instruments and equipment; photographic equipment; watches, clocks, clockwork devices, and parts. Of

the total 8,295 machines, 10% are over 20 years old, over 36% are 10 to 20 years old, 10 to 20 years old.

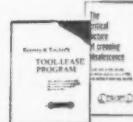
Machines over 20 years old, which should definitely be replaced.	Machines 10-20 years old, which should probably be replaced.	Machines less than 10 years old.
882 automatic and manufacturing type milling machines	13% 43%	44%
2350 vertical milling machines	4% 30%	66%
4087 knee type horizontal milling machines	13% 40%	45%
380 bed type milling machines	31%	69%
396 horizontal and vertical precision boring machines	3% 23%	74%

Figures adopted from 1953 American Machinist survey of Metalworking Industry.



KEARNEY & TRECKER CORP.
6784 W. National Ave., Milwaukee 14, Wis.
Please send me Bulletin TL-10A on Tool-Lease Program and booklet titled "Critical Picture of Creeping Obsolescence."

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Title.....
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The Select-O-Matic Custom Unit. mounted on sturdy, sliding metal tracks for neat, compact, built-in industrial or commercial installations.



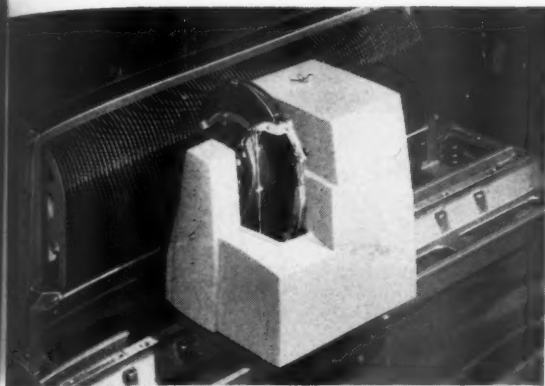
The Select-O-Matic Console for your home. Arrange your programs at the flick of a finger . . . no albums to handle. Light Korina or rich mahogany cabinet.

See Seeburg for the practical answer to



COPR. 1955 SEEBURG MUSIC LIBRARY, INC.

The Select-O-Matic Library Unit. Attractively housed in limed oak cabinet. Requires only 17½ x 38½ inches of shelf, table or desk space.



The Select-O-Matic Mechanism. Most revolutionary development for the playing of recorded music since the invention of the phonograph.



Seeburg Background Music Library. Includes monthly refresher service. Manufactured for Seeburg by RCA Victor Custom Record Division.

er to background music for your business

Here is the new, practical answer for you who want to bring the benefits of music to your business. Practical because it is *automatic*. Practical because it is *versatile*. Practical because it is *inexpensive*.

THE SEEBURG PLAN. The Seeburg high fidelity equipment is available under a LEASE-PURCHASE agreement whereby nominal monthly payments apply toward eventual ownership of the entire sound system. The Seeburg Background Music Library, with monthly refresher service, is furnished at a separate monthly rate.

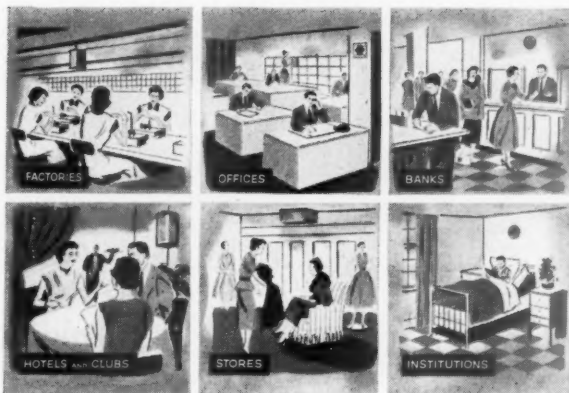
THE SEEBURG BACKGROUND MUSIC. Every selection has been scientifically arranged and programmed for work and atmosphere music. Recorded "live" by outstanding orchestras, this library is mastered and pressed to exacting high fidelity standards (30 to 15,000 c.p.s.) on 45 RPM Extended Play discs of pure virgin Vinylite.

THE AUTOMATIC SEEBURG SYSTEM. The music is played by the world-famous Select-O-Matic mechanism. It's completely automatic . . . no attendants are required. However, its advanced design permits playing special musical programs if desired.

HIGH FIDELITY THROUGHOUT. With a complete Seeburg system you will also enjoy all the benefits of high fidelity reproduction. For all the sound equipment—from the pre-amplifier to the genuine diamond stylus pickup to specially designed Seeburg extended range remote speakers—is high fidelity in the truest sense.

PAGING SERVICE. A complete, efficient paging and public address system is also provided.

USE WITH EXISTING SOUND SYSTEMS. If you have a sound and paging system, you'll be happy to learn how easily you can add Seeburg Background Music Service.



Whatever, or Wherever, Your Business

Whether you want music for a factory or office, a bank or savings and loan company, a department store or a shopping center, a hotel or club—whether your business is located in a metropolitan center, a suburb, a small town or a village—you'll want to see Seeburg. Investigation will prove the Seeburg Plan to be as unusual in concept as the system is brilliant in performance.

J. P. Seeburg Corporation, Chicago 22, Illinois

- () Please send data on Seeburg Background Music Service.
() I'm interested in a Seeburg Select-O-Matic for my home.

Name Position

Company

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City Zone State



J. P. Seeburg Corporation, Chicago 22, Illinois

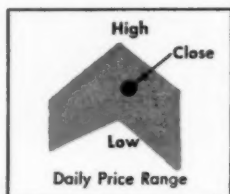
FINANCE

General Motors Common Stock:

Dollars per share

108 —
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Price



In the surging year-end bull market, GM closed near its 1954 high....

...then came wild rumors that GM directors planned a stock split, and the stock soared...

...when the split turned out to be nothing more than a new common issue, GM stock quickly relapsed.

Daily sales in thousands of shares

70 —
60 —
50 —
40 —
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20 —
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Volume

20 21 22 23 27 28 29 30 31 3 4 5 6

Data: Standard and Poor's

BUSINESS WEEK

When the Rumors Went Wrong

"The sell-off dynamited some \$7-billion worth of paper profits out of the Big Board list," a Wall Streeter said about last week's market gyrations (page 138), "and General Motors was the fuse."

This may be an oversimplification,

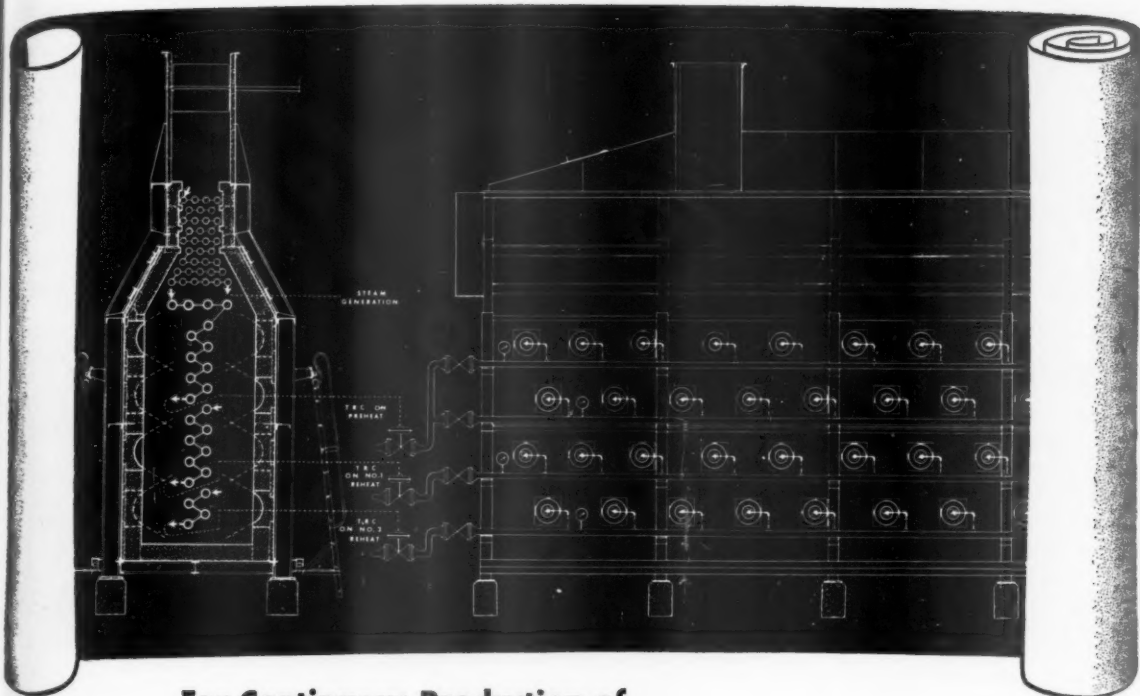
for there were other forces working upon the volatile market—including the Federal Reserve Board's hike in margin requirements (BW—Jan. 8 '55, p. 27). Yet it calls attention to a factor that Wall Streeters didn't miss seeing: the facts and fancies that revolved last week

around the nation's largest manufacturing company. The chart above sums up the story.

• **Hectic Week**—Before trading started on Monday, Jan. 3, rumors of a coming GM stock split or stock dividend were whipping through Wall Street. Word

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got out that GM directors were to meet that afternoon. That seemed to confirm the rumors, and the market was flooded with buy orders for GM common.

The stock opened \$4.12 above the previous close. During the day, it was up \$9.50 at one time, and it closed at a gain of \$7.25. After the exchange had closed, however, GM directors announced that there would be no stock split but, rather, a new issue of common to be sold to present shareholders at the ratio of one new share for every 20 shares currently held.

This move, designed to raise some \$325-million of new money for GM, threw cold water on sizzling bulls. GM opened next day at \$99, down \$6.12 from Monday's close, though it rallied to \$100.75 before the bell. Volume was heavy that day, and the Dow-Jones industrial average lost \$2.72.

After the close, the Federal Reserve Board announced its new margin requirement of 60%, up 10%. On Wednesday, the full force of the selling wave hit. The ticker ran 15 minutes late at one point; the Dow-Jones industrials were off \$8.93, with GM off \$3.62. Before the week was out, GM was selling as low as \$94.50 a share—\$3.37 less than the previous Friday's close before the rumoring and announcing began, and \$12.87 below Monday's high.

• **On Second Thought**—The doings on Wall Street tended at first to overshadow the GM offer, but financiers took another look at it this week.

GM now has some 88-million shares of common outstanding, which would make the new offering about 4.4-million shares, at the 20 to 1 ratio. Offering price is expected to run somewhere between \$74 and \$80 a share. This is said to be the largest dollar volume of new common stock ever offered by any corporation. Authority for this claim is Morgan Stanley & Co., which will manage the syndicate underwriting the offering.

The Street isn't surprised—nor is Detroit—that GM should need \$325-million at this time. The company is near the midpoint of an expansion program that may run to \$1.7-billion. Last January, it raised \$300-million in debentures; now it is ready to sell the new common stock early next month. Reports from Detroit indicate that much of the new money will go into working capital. One theory is that with contract negotiations with the United Auto Workers starting in April, GM wants to have its money in hand before there is any possibility of a strike threat.

• **No Rich Uncle**—According to reports, GM's directors were far from unanimous about how to raise new money. Before deciding on the stock offer, they looked at the alternatives:

• **A cut in the dividend rate** on common stock, perhaps from the cur-

were to meet \$5 a year rate to \$2. This would mean about \$264-million for the company's use. The directors quickly rejected the idea, though. It would violate GM's traditional formula for sharing earnings between labor and capital, might depress the price of GM common shares far enough to hurt stock prices generally, would not give GM the money it needs immediately.

The most telling point against the plan was the surely adverse reaction of stockholders—including the directors themselves.

• A stock dividend to soften a cut in cash dividend—switching some of the pay-out from cash to stock. But this wouldn't yield cash right away either, and it was soon discarded.

• A new issue of preferred stock or more debentures. Directors are believed to have considered this plan as the most feasible alternate to the stock issue proposal. In the end, though, they

decided not to saddle GM with additional fixed obligations. The company already has outstanding one debenture issue and two issues of preferred stock.

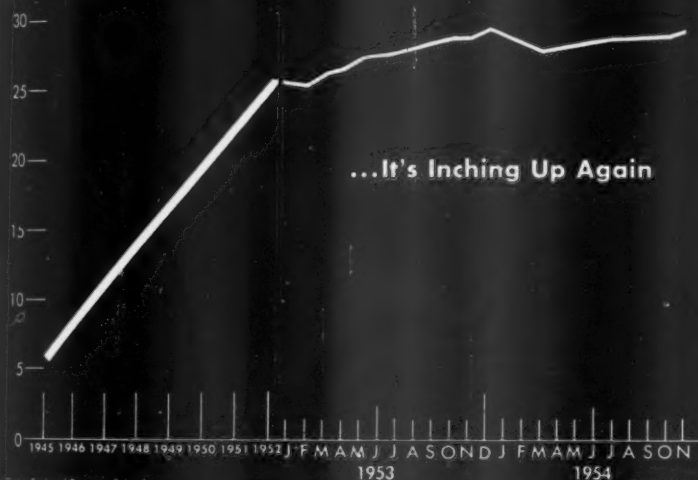
• **Selling Problem**—Speculation now centers on how stockholders will react to the new offering. Will they exercise their rights to buy new shares, even at a price well below the market?

Biggest holder of GM stock is the giant E. I. du Pont de Nemours & Co., which has some 20-million shares. To exercise its rights to buy 1-million new shares, du Pont would have to lay out another \$74-million to \$80-million at a time when it has to support its own continuing expansion. Many people doubt that du Pont will pay that much money now.

Detroiters and Wall Streeters also doubt that some of the large individual holders of GM stock, such as Alfred P. Sloan, Jr., Charles Stewart Mott, and Charles F. Kettering, will exercise their

Consumer Credit...

Billions of Dollars



Date: Federal Reserve Board

Toward a New Record?

Don't be surprised if forthcoming Federal Reserve figures show that consumer credit at the end of 1954 climbed to a new high.

At the beginning of last month (chart above), consumer credit stood at more than \$29.2-billion. This was the highest level since \$29.5-billion was recorded at the end of December, 1953.

Some falling off in January is usually expected, and 1954 was no exception. Total loans fell in January, and again in February and March. A turnaround came in April, and since then the total has again been edging upward.

• **Climb**—The pace of the rise in November was faster than that of a year earlier. The increase for the latest November was \$234-million over October, compared with a \$160-million increase in November, 1953.

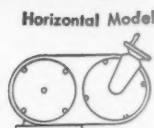
Installment credit alone, at \$22-billion, showed a rise of \$62-million during November. In this category, auto loans dipped \$44-million during the month, and repair and modernization loans were down \$6-million. But these declines were more than offset by increases in other kinds of consumer installment loans.



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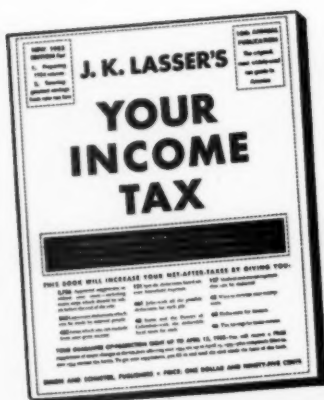
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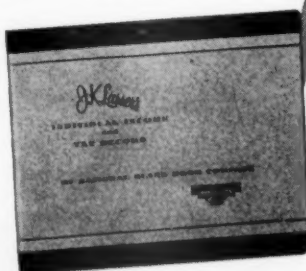
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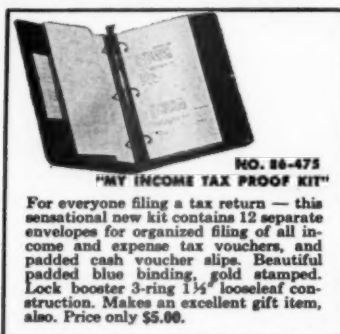
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Morgan Stanley, acting as underwriter, will purchase any rights that these large holders and others may want to sell. The firm estimates it may have to buy as much as 40% to 50% of these rights. It will then probably exercise the rights and sell the new stock itself or it could sell the stock short, subsequently covering the short sale with stock bought at the lower subscription price.

• **Prospects Bright**—Reliable estimates put GM's earnings for 1954 at \$9 a share, compared with \$6.69 in 1953. GM's sales for 1954 were again near the \$10-billion mark set in 1953.

When the offering appears next month, Morgan Stanley may attempt to stabilize the price of GM common in the market. It will have the right to do this under the contract it expects to sign with GM on Feb. 7. The procedure is often used with new offerings of public utility stocks, but many observers had thought the sums of money would be too vast for the syndicate to use it in GM's case.

FINANCE BRIEFS

Short-term business loans by New York City banks brought an average interest of 3.26% in the first half of December, the Federal Reserve reports. Three months earlier, the figure was 3.24%; a year ago it was 3.46%. For term loans, which mature in more than a year, the first-half December average interest was also 3.26%, compared with 3.12% in September and 3.52% a year earlier.

Pension funds for public employees last year bought 36% of the \$2.8-billion long-term corporate bonds, rated "A" or better, that went on public sale. Union Securities Corp. reports that the funds, covering more than 3.6-million teachers, firemen, policemen, and other public workers, have assets around \$10-billion, and are growing at a 16% annual rate.

Joint employment of operating and mechanical department personnel will be ended Feb. 1 by the Maine Central and the Boston & Maine railroads. Pres. E. Spencer Miller of Maine Central says the separation—ending a practice begun in 1933—has been planned for some time "to step up the efficiency of both roads." He added that his road had no plans for consolidating with any other line or system.

Mammoth press mashes auto into small bale....



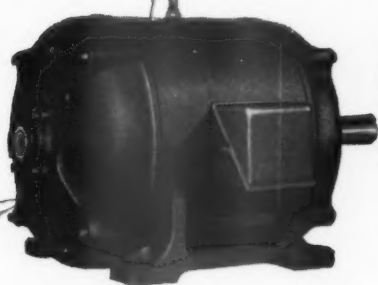
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BUSINESS ABROAD

An Audit of Post-Stalin Russia

● Collective rule is shaking down, but the Malenkov-Khrushchev struggle for the top goes grimly on.

● So far, promises of more consumer goods have borne meager fruit.

● To fulfill them would force a pulling in of the aggressive horns of foreign policy.

Joseph Stalin's death nearly two years ago rocked the world like no other event since the end of World War II. In almost every Western capital it was assumed that an era had ended in Russian affairs.

Subsequent events inside Russia have proved this assumption to be correct. There have been deep changes in Russia—so deep that Stalinism, as the world knew it, can never return. But so far the pattern of the post-Stalin era hasn't come into focus. None of the basic problems left by Stalin has been solved. There has been a bitter struggle for the succession; a lack of decision in economic policy; and contradictory trends in foreign policy—in other words, no hardening of new patterns.

Still, by the end of another year, it's possible that the outside world will have some solid clues as to which way post-Stalin Russia is moving.

• **Four-Way Split**—The collective leadership that took over Stalin's power seems to be shaking down, with Premier Malenkov coming out as the real boss, though not as a second Stalin. So far leadership in the Kremlin has been an uneasy partnership. In effect, the country has had too many dictators but not enough dictatorship for the requirements of a totalitarian state. That's because power has been split at least four ways—between Premier Malenkov, Communist Party boss Khrushchev, Foreign Minister Molotov, and the Red Army.

As for economic policy, the Kremlin must decide soon what it's going to do about the lop-sided economy left by Stalin—whether to commit more resources to consumer goods and how much to count on the exploitation of new land to solve Russia's food shortage. After boosting 1954 investment in the consumer goods industries the Kremlin seems to have let this program slide, just as it did the 1953 program for

greater incentives on the collective farms. This year's budget, due in the spring, may reveal what's to happen in these two fields in the immediate future. The next Five Year Plan, which must come out sometime this year, should provide another clue.

If a single-handed leadership begins to emerge and also a clear-cut economic policy, you can be sure that Soviet foreign policy will be affected. So far Moscow's policy abroad has been compounded of one part Malenkov's peaceful coexistence line and several parts of Molotov's world conquest strategy. With a new pattern on the home front, Molotov would have to pull in his horns or face retirement.

• **Social Ferment**—In the background, meanwhile, there seems sure to be a continuation of the ferment in Soviet society that started immediately after Stalin's death. More recently this has been showing up in a sort of spontaneous revolt, especially strong among intellectuals and youth, against Stalinite orthodoxy. In the face of this rebellion, the Kremlin has had to allow Soviet novelists, musicians, artists, and even economists more freedom of expression. It has also had to allow public discussion of subjects that Stalin never allowed to be aired. For example, a recent issue of Pravda revealed to Soviet readers that the average American has his own home, his own car, and his own refrigerator.

Of course, this trend to greater freedom is opposed by strong counter forces. The Communist Party bureaucracy opposes it in self defense. Any talk of change is a threat to its power.

• **The Struggle**—Ever since Stalin's death, but especially since the liquidation in August 1953 of Beria, Stalin's police chief, there has been intense speculation in the outside world about the power struggle in the Kremlin. There can be no doubt that it goes on

and that it is a basic fact in the present Soviet scenery. It means that there is constantly an uneasy balance in the Presidium, where decisions are made by majority rule, as contrasted to Stalin's Politburo, which took the final word from him. This, among other things, has given the Red Army new authority, perhaps even the balance of power in some situations.

When it comes to individuals, the struggle revolves around Malenkov and Khrushchev—with Molotov always important in the offing.

As Premier, Malenkov has two advantages. He heads the Presidium and he runs the state bureaucracy. Khrushchev's power is based on his control of the Communist Party apparatus.

• **Glimpses**—The Malenkov-Khrushchev feud comes into the open sometimes in the differing views expressed on economic questions by Izvestia, the government newspaper, and by Pravda, the Communist Party paper. But the real struggle has been conducted, and still is, behind the scenes—to get control of the secret police on the one hand and of the country's economic administration, on the other. (From the start Malenkov and Khrushchev have both taken responsibility in public for economic policy.)

The evidence suggests that Malenkov is winning on both fronts. He has his own man, Syerov, in charge of the new State Security Commission, which has branches throughout the country and has direct control of all security troops that were formerly under MVD command. Another Malenkov man, Saburov, who is leading economic administration in Russia today, was picked as the keynote speaker last fall at the celebration of the 37th anniversary of the Bolshevik revolution. This was a real political distinction for Saburov and a sure sign of the hold Malenkov has over the economic administration.

• **Promises**—You can't pin one economic program definitely on Malenkov and another on Khrushchev. There is just not enough evidence for that. But there is no doubt that Malenkov has identified himself with the promises made in 1953 to give the Russian people more consumer goods and that he has the most to lose from any retreat to a rigid Stalinite policy. There is no doubt either that men like Saburov, who have been trained as engineers and economists, take a different view of economic problems than does the Com-



The Seas Beneath Us

In the far, far geologic past, a great inland sea once stretched from Newfoundland to the Gulf of Mexico. The Sinclair geologist in this picture is examining evidence of that fact—a familiar type of marine fossil. It is one of thousands of pieces of evidence that must be studied before the decision to drill or not to drill can be made.

Sinclair now has 11 million acres of hunting lands for oil—expanded from 5 million acres in 1949. This vast acreage checkerboards the same area from Canada to the Gulf that, ages and ages ago, lay submerged under water.

Of this land, about 350,000 acres now produce oil for Sinclair. It is the job of Sinclair scientists to find still more productive acres to meet the demands of the Company's ever-expanding markets.

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munist Party bureaucracy. Their chief interests are in making Soviet industry as modern and efficient as possible. And Saburov's speech last fall indicated his belief that to accomplish this, Soviet technicians and skilled workers must get more consumer goods.

• **Little Fulfillment**—Despite the promises of more food and consumer goods made by the new regime soon after Stalin's death, its record hasn't been good either in terms of consistent policy or results.

In August, 1953, Malenkov talked of a large and rapid expansion of consumer goods. He said that this could be achieved by (1) better use of existing industrial capacity, (2) an increase in labor productivity, and (3) a shift in investment policy.

In fact, only one of the three materialized—a shift in investments. In the 1954 budget, investment in consumer goods industries went up from 6.5% of the total budget to 9.6%—the first real increase in 20 years. But it's not clear yet whether or not this budget policy was fully carried out. There is some evidence that in the second half of 1954 some investment was diverted from consumer goods to agricultural machinery.

Certainly 1954 production of consumer goods, except for luxury items like TV sets, showed little improvement over 1953. Output of cotton cloth went up by less than 2%—from 5.8-billion yd. to 6-billion yd. Production of shoes rose from 242-million pairs to 266-million (for a population of over 210-million).

• **Bad Farm Year**—At the same time 1954 was one of the worst agricultural years since the war. Grain output was about 115-million tons, about where it had stood for four years. Vegetable crops were below prewar. Livestock production hardly rose above the disastrously low level of 1953. (The Soviet Union imported over 200,000 tons of meat in 1954, making it the world's third largest meat importer.)

It was midway in 1954 that Moscow reversed the farm incentive policy that Malenkov had introduced late in 1953. Under this policy collective farm workers paid lower taxes and got more money on the free market and from the state for the food they produced on their own private plots. Apparently this policy induced Soviet farms to produce a little more. But instead of selling the extra production, they consumed it. In any case, the policy has been partially shelved and the big emphasis in agriculture has been put on the exploitation of virgin lands in Central Siberia.

This land program is both costly and risky. Most of the new land is in an arid region. Dry weather for several summers could wreck the whole scheme.

• **Accent the Heavy**—The fact is, of

course, that heavy industry still gets almost as high a priority as it did under Stalin. As a result two industries in particular—steel and electric power—turned in good performances last year. Steel output rose from 41.8-million tons in 1953 to 45.5-million tons in 1954. Electric power (much of it now used for the production of nuclear weapons) went up from 133-billion kwh. to 146.3-billion kwh.

Coal output fell behind schedule because of lagging labor productivity. According to at least one official Soviet report, the low productivity was caused by shortages of food and consumer goods in mining areas.

At the same time the Soviet metal-working industry was improving its equipment, especially its machine tools. According to one estimate, only 5% of total Soviet industrial production in 1939 was carried on with automatic tools, whereas in 1954 the figure had reached at least 50%.

The U.S. Stake Declines

Private investment abroad lags behind the growing world economy, OEEC reports, especially in Europe. Suggested cure: "aggressive wooing."

The Organization for European Economic Cooperation has taken a long look at U.S. private investment abroad, especially in Europe. Its report is not encouraging. In a study released this week, OEEC declares that not only has private American investment failed to keep pace with the growing world economy, but also that Europe's relative share of new U.S. capital exports shows a striking decline.

• **No Easy Touch**—There's not much Yankee capital "just waiting for an invitation" from Europe, warns the study. If the U.S. investor is to put money into any of the 18 OEEC nations, he will have to be "wooed aggressively."

Through the 1920s, New York supplied more long-term capital to foreign nations than any other financial center, much of it in the form of private loans to governments. The Depression ended that. Since 1947, when Washington agencies pretty well took over U.S. foreign lending, OEEC has been unable to detect any appreciable expansion of private U.S. capital exports. In fact, total net exports of capital averaged \$859-million annually from 1947 to 1953—not much more than half the 1920's average, if you figure dollars in terms of purchasing power.

• **Diminishing Stake**—As for Europe, OEEC sees it at the hungry corner—the \$688-million net investment in the 18 nations since 1947 is only 10% of

• **Automation**—There is considerable evidence in Soviet technical literature today that Russia has started to go in for automation and that Soviet industrial leaders like Saburov are well aware that Russia can't afford to lag too far behind the U.S. in this development.

When you add the demands for capital goods that Communist China is now making on Russia and the provision of capital goods (including a steel mill) that Moscow is making to Asian countries like India (page 132), it's hard to see how more can be squeezed out of Soviet resources for consumer goods in the upcoming budget. If more is squeezed out, then you will be seeing the signs of a new economic pattern in Russia.

That in turn is bound to affect Soviet foreign policy. For Russia just doesn't have the economic capacity to give its own people a better break and at the same time continue an expansionist policy abroad.

all U.S. private investment (compared with more than 20% for Europe in the 1920s). Canada and Latin America share two-thirds of the total between them, while Middle East oil sopped up most of the rest. And this, despite the fact that past U.S. investments on the continent have been paying off handsomely, to the tune of nearly \$2-billion in profits since the war. Of these, \$904-million was reinvested in Europe, and \$1-billion came home to the U.S.—a good bit more than the amount of new capital going into Europe.

This, OEEC says, shows just how necessary it is for the U.S. to follow a good creditor policy.

• **Tactics**—OEEC thinks that tax incentives granted to overseas investors by the U.S. government—as outlined by Pres. Eisenhower in this week's message on foreign economic policy—would encourage investment. But, in the end, it's up to the OEEC countries themselves.

OEEC recommends that Europeans (1) use intensive publicity and better contacts between governments and businessmen on both sides of the Atlantic, (2) streamline the formalities and red tape of investment—as the Dutch have done (BW—Dec. 9 '53, p13)—(3) further liberalize controls on exchange transfers, (4) use more tax incentives and similar measures.

Cloak and Dagger

One plot leads to another, Central Americans fear. The Panama assassination makes them jittery.

This week, as often in the past, Central America was in a mess. Instability is infectious in the area—when the “ins” are toppled in one country, “outs” everywhere get ideas. And Americans—diplomats and businessmen—get a headache.

The murderer of Panamanian Pres. Jose Remon (BW—Jan. 8 '55, p100) still hasn't been caught, and neighboring governments are jittery. Most jittery is Costa Rica's Pres. Jose Figueres. Democratically elected, inclined to the left, Figueres has antagonized people—at home and next door—for several years.

Figueres is continually sparring with Nicaragua's old-school dictator, Anastasio “Tacho” Somoza, who charges that a plot against him was hatched in Costa Rica last spring with Figueres' blessing. Further, Figueres has enraged Venezuelan Pres. Perez Jimenez by allowing Venezuelan exiles to cook up “revolutionary plots” in Costa Rica, and—worst of all—by snubbing the 1954 Inter-American Conference at Caracas on grounds that it was held in a totalitarian country.

• **War of Nerves**—Figueres, who says that the issue of democracy vs. dictatorship must be settled in Central America once and for all, has been especially upset in recent months while several hundred Costa Ricans have been “vacationing” in Nicaragua. He believes they have formed a “liberation army” with Tacho's tacit approval—perhaps with Tacho's new air force of 25 surplus fighter planes bought from Sweden.

The war of nerves came to a head a week ago when Somoza hinted that the Panama assassins used Costa Rica as a base, and Perez Jimenez sent a task force of Venezuelan planes on a “goodwill” mission to Nicaragua. Last weekend, Figueres blew up—announced that invasion was imminent, called out the guard, insisted that the Organization of American States take up the threat to peace. At midweek, OAS was meeting in Washington, and there were reports of border skirmishes.

With domestic troubles of his own, Somoza denies everything, suggests Figueres is troubled by “hallucinations brought on by a guilty conscience.”

• **Broad Unrest**—All of the area feels the heat. Honduras' new chief of state has reshuffled his cabinet and posted tighter border watches. In Guatemala, Pres. Castillo Armas is running into open opposition, and rumors of a mili-

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If you are a manufacturer of instant hot chocolate, how do you persuade restaurant and fountain patrons to consume twice as much of your product?

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This attractive and serviceable counter display, made by National Folding Box, is credited by S. Gumpert with contributing to a 100 per cent sales increase.

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\$25 Million Strong!

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See Clues on page 170

tary uprising against him float out of Guatemala City.

The Guatemalan revolution last June drove many Communists underground in Central America—now they are looking for trouble and reveling in the present unrest. Washington, touchy because so many Latin Americans consider the Guatemalan affair as barefaced Yankee intervention in a nation's affairs, hesitates to lay down the law or to choose between the Nicaraguan dictatorship (which supports the U.S. four-square

in all diplomatic affairs) and democratic Costa Rica (which doesn't always).

There's no denying that, in the eyes of the world, the U.S. is responsible for events in Central America. The nations are a showcase of economic and political development—or lack of it—right on the U.S. backstop. These 10-million people are a market for \$250-million worth of U.S. goods yearly; the countries are the repository of some \$750-million worth of Yankee investment (BW—Jul.17'54,p116).

4-Way Deal Seeks Peru Copper

Optimism over copper's future was evident last week as four big U.S. mining companies announced plans for joint development of one of the largest copper ore reserves in the world—in southern Peru (BW—Nov.13'54,p156). The five-year development plan, to cost \$200-million, is proof that the copper companies have faith in the future of their metal, despite heavy inroads by aluminum.

They feel this future is assured, whatever the short-run difficulties such as the present strike in the Northern Rhodesian Copperbelt (BW—Jan.8'55, p101), which shows no signs of settlement, and a threatened tie-up in the ever-turbulent Chilean fields.

• **Where and What**—The Peruvian deposits—about 1-billion tons of copper-bearing ore with a 1% metal content—are in isolated mountains not far from the Chilean deposits (see map). While the 1% ore ratio is low compared to the Rhodesian reserves, it compares favorably with the neighboring Chilean Chuquibambilla mine of Anaconda Copper Mining Co., and Kennecott Copper Corp.'s Utah mine in the U.S. Furthermore, the reserves can be worked with open pit methods, a saving over Africa's shaft mining.

The development will include a concentrate mill, a townsite, a 110-mi. railroad from the port of Ilo to the mine, port facilities, and warehouses.

The reserves themselves consist of three separate claims in the same region, located about 10,000 ft. up on the rough western slope of the Andes. The claims are: American Smelting & Refining Co.'s Toquepala, including about half of the deposits; American Smelting's Quellaveco property; and the Cuajone mine of Cerro de Pasco Corp. and Newmont Mining Corp.

• **Setup**—Under the setup, the Toquepala property—the only one to be developed at the start—and the two other claims are transferred to a joint company, Southern Peru Copper Corp. American Smelting will own 57½% of the capital stock; Cerro de Pasco Corp., for 50 years operators of Peru's biggest



ORE FIELD in Peru is near Chile mines.

copper-zinc-lead mining development, will hold 16%; Newmont will hold 10½%; and Phelps Dodge Corp., 16%. An Export-Import Bank loan of \$100-million to Southern Peru has already been O.K.'d, contingent on the companies' getting \$95-million from private investors.

The Toquepala development marks the first time the copper companies have gone into partnership for such a project. But the location of the mines in the same area made it common sense to share development costs. It's also in line with Export-Import policy, which over the last years has encouraged such joint operations as 1953's \$20-million New Zealand paper and pulp mill project (BW—Sep.26'53,p164).

• **Side Effects**—The companies may also have been thinking of future relations with the Peruvian government. At the moment, these relations couldn't be better. Following its policy of encouraging private, foreign investment, Peru has assured the Southern Peru company a stable income tax rate, waived export duties, and guaranteed free copper exports and free exchange. But with so large an investment, it may

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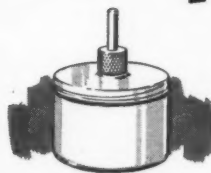
Foods

Potato salad, chow mein, peas, cream-style corn, tomatoes, molasses, chocolate.



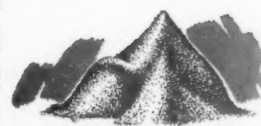
Chemicals

Caustics, acids, dyes, petroleum solvents, soaps, sludges, latex, synthetic resins.



Pastes

Paper coating, starch, seam paste, size, adhesive dope, heavy grease, graphite sludge.



Abrasives

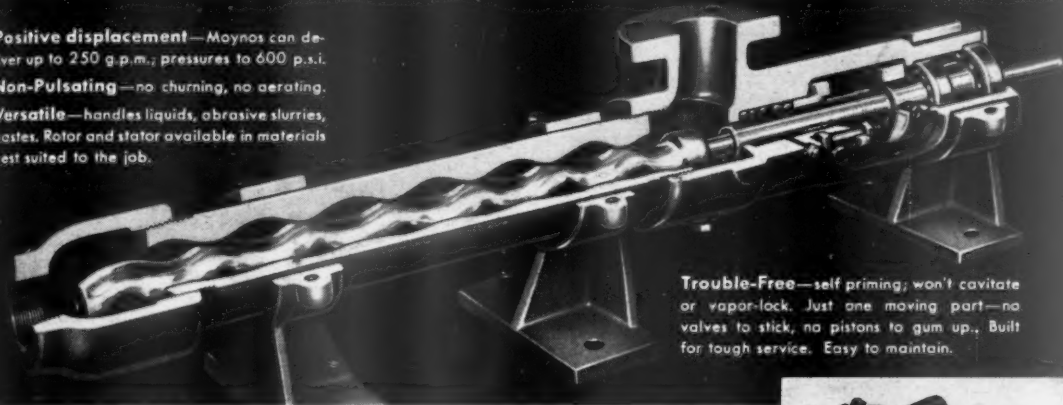
Insulator clay, frit, ground glass and water, porcelain glaze and enamel, cement, plaster.

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R & M Moynos handle almost anything that can pass through a pipe

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This is how the Moyno works: a screw-like rotor turning within a double-threaded stator creates cavities which progress toward the discharge end of the pump, carrying the material being handled. The result is a

smooth, steady flow, free from pulsation and turbulence.

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Industrial-type Moynos are available with capacities to 250 g.p.m.; pressures to 600 p.s.i. Small Moynos (see inset), used as original equipment, serve on washers, water pumps, sprayers, and many other products.

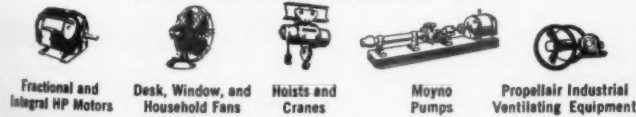


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have seemed good insurance to have several companies in the enterprise to face possible future troubles together.

Copper men are quick to point out that Toquepala production, at least five years off and as yet only estimated (at 100,000 tons of copper annually), won't affect current price or production. But the deal is likely to have a psychological effect on Chile, especially. Chile has long enjoyed the privileges that go with being Latin America's only large copper producer. Peru's emergence as a rival may soften Chilean government and workers' attitudes toward the copper companies.

The possibility of a new source of copper, even five years away, may also slightly strengthen the hand of U.S. copper men fighting against a price rise in domestic metal.

BUSINESS ABROAD BRIEFS

Prefab houses may become a big item in West Germany's penetration of Latin American markets. Deutsche Bergwerks & Grubenbau, GmbH, has contracts for 254 dwellings for Mexico, El Salvador, Venezuela, and Nicaragua.

France's economic overhaul—slow in starting—advanced a bit with a new government decree aimed at decentralizing industry. New factories planned for the Paris region must now have a government O.K.; officials can divert developments to other areas.

A sweeping, \$50-million expansion is in the cards for the Swedish-controlled Telefonos de Mexico, the Federal District's phone company. Telefonos means to add 120,000 new phones (Mexico City's 3-million inhabitants now have 160,000 sets), and has a government promise of a substantial rate increase.

Aluminum Co. of Canada Ltd. has put \$24-million worth of construction equipment on the block—everything from dump trucks and flatcars to helicopters and camp facilities. The stuff was used building Alcan's huge British Columbia hydropower-aluminum installation. S&S Machinery Co. of Brooklyn will handle the disposal, which includes a leasing program as well.

A cross-continent rail-highway system now joins the Pacific and Atlantic coasts of South America—from Arica, Chile, to Santos, Brazil. The final link—a rail line between Santa Cruz, Bolivia, and Corumba, Brazil—was inaugurated last week. First benefits: a joint petroleum development, which may provide Bolivian crude to oil-starved Brazil.

India's Steel

New Delhi may sign for both Russian and British mill-building offers . . . Italian purchase of Ruhr coal.

That old cliff-hanger, Indian steel expansion, is still with us this week (BW-Jan. 8 '55, p99). It now seems clear that India, rather than choosing between a British and Soviet offer to build a 1-million-ton-a-year mill, will try for both.

New Delhi announced that a team of Indian experts will go to Moscow, probably next month, to study the Russian offer on the spot. In India, the Soviet technical mission, which has been touring the country, is set to make its final proposal. Gossip has it that it is for an ingot mill, capable of turning out structural steel, rails, axles.

Meanwhile, British Minister of State Low is making progress in New Delhi talks. It looks as if a British technical mission may also be asked out to India to appraise the situation in the light of Britain's offer to make a government-to-government deal out of the earlier Birla mill offer (BW-Dec. 4 '54, p140). The British would base their offer on the willingness of the British Metallurgical Equipment Export Co. to build a \$126-million plant. The deal may be clinched when Indian Prime Minister Nehru goes to London later this month.

In still another deal, India is putting pressure on Krupp-DEMAG, a German combine whose offer to build a half-million-ton-a-year steel mill was accepted in principle in 1953. New Delhi announced that it will encourage local manufacturers to supply equipment for this plant. Furthermore, when the German specifications are finally in, India will shop around for the best bid.

The Italian press has been quick to point out that the recent purchase of a Ruhr coal mine by the Italian Railway Administration may not be so good as it looks.

The Italians bought 85% of Constantin der Grosse mine, a move that puts them in the Ruhr for 2% of its total coal production. The mine will supply about a third of Italy's annual coal imports at a government-claimed saving of some \$8-million a year.

This saving would easily cover the 3% annual interest that Swiss bankers are getting for their \$23-million three-year loan to finance the purchase. But critics say the Italians are now tied to the mine's output even if price, freight, or trade advantages made it more advisable to buy coal elsewhere.



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INTERNATIONAL OUTLOOK

BUSINESS WEEK
JAN. 15, 1955



Washington may try to grab the ball at the Afro-Asian conference. The meeting will be at Jakarta (Indonesia) late in April (BW—Jan. 8'55, p93).

Many U. S. officials fear the Chinese Communists will use the conference to set up a permanent Asian political organization—with Peking in the driver's seat.

That would widen the gulf between Asia and the West, and might eventually lead to Communist domination of the whole area.

U. S. strategy hasn't crystallized yet. But this proposal is being considered at a high level:

The U. S. would encourage its Asian allies, including Japan and Pakistan, to send top-ranking delegations to Jakarta to argue for closer economic cooperation with the West. They would go armed with an offer of a big new U. S. program to aid Asian economic development.

This way, it's hoped, the U. S. could spike Peking's guns.

Such a plan is sure to meet stiff opposition within the Administration.

Some officials believe that any open U. S. move like this would do more harm than good. They fear it might keep India out of any new development program—because Nehru just won't choose publicly between China and the West.

There's also the danger that Red China might deal itself into any aid program put forward at Jakarta. This, of course, would automatically kill it with the U. S. Congress.

A hands-off policy is advocated by these people. Their idea is to play down the importance of the conference.

No decision can be made—until the Administration makes up its mind on an Asian aid program.

Joseph Dodge's new Council on Foreign Economic Policy will start a formal review of Asian aid next week. It will start with a policy paper representing the agreement that has been reached so far among the Foreign Operations Administration, State Dept., Treasury Dept., and other interested agencies.

Still open are the questions of how much aid, which agency will administer it, what form the aid program should take.

FOA Administrator Harold Stassen has talked Asian aid with members of the Churchill cabinet in London.

The British assure Stassen that they are all for a new Western effort to help the free Asian countries. But they advise strongly against any effort to establish an Asian counterpart to the Organization for European Economic Cooperation, or in fact any central secretariat.

According to the British, the Asians hotly resisted any regional organization when the Colombo development plan was set up. The Asian countries insisted on a series of bilateral agreements, held together only by annual conferences plus civil service consultations as needed.

There were no surprises in Pres. Eisenhower's message on foreign

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

JAN. 15, 1955

trade policy. The program is identical with last year's, except for inclusion of the proposed International Finance Corp. (This is supposed to help send venture capital overseas.)

What's new this year—apart from Democratic control of Congress—is Eisenhower's tight control over foreign economic policy. This will show up when Congressional hearings on the Reciprocal Trade Act begin next week.

Seven Cabinet members are due to testify, with Secy. of State John Foster Dulles leading off. For the first time, the Cabinet will speak with one voice on the touchy tariff issue.

Administration solidarity and Democratic control of Congress assure passage of most of the President's program.

The key fight will come over ratification of the General Agreement on Trade & Tariffs. Protectionists hope to stall further tariff cuts by killing off GATT.

There's no great enthusiasm abroad over Eisenhower's trade program.

At the GATT meeting being held in Geneva, our trading partners are acting like the man from Missouri. They want to be shown—by Congressional action.

Even that will leave our foreign friends unhappy about two things:

- The escape clause in the Reciprocal Trade Act, which means that foreigners have no assurance that tariff cuts will be permanent.
- Our farm surplus disposal program, which looks to them like sheer dumping.

Britons heard good news on Wednesday: Their 1954 exports were the highest, by volume and by value, in the nation's history. The total was £2.7-billion, £100-million over the 1952 record year.

Totting up other figures of the year, a Treasury official told Londoners that, in 1954, industrial production jumped 5% or 6%, personal consumption was up 3%, savings and probably investment increased smartly.

Time was when a revolt in Central America was shrugged off as just another round in the area's musical-chairs politics. Not so now. This week's flareup in Costa Rica (page 129) puts U. S. policymakers in a nasty box.

You couldn't be sure at midweek whether the uprising was a completely homegrown revolution or an affair engineered in next-door Nicaragua. The rebels seem to have outside help. There's no love lost between dictatorships (like those in Nicaragua and Venezuela) and the outspokenly democratic Costa Rican government of Pres. Jose Figueres.

The world is watching Washington. Figueres is known in Europe and Asia as one of Latin America's few democratic leaders. Washington likes him, despite his occasional left-wing outbursts, believes his reforms set a good example in the hemisphere.

What can Washington do? The U. S. vigorously supported the anti-Communist overturn in Guatemala.

This time, Washington sympathizes with the government in power. And while it hesitates to intervene, the U. S. can't afford to see Figueres swamped. So we'll intervene—to whatever extent necessary.

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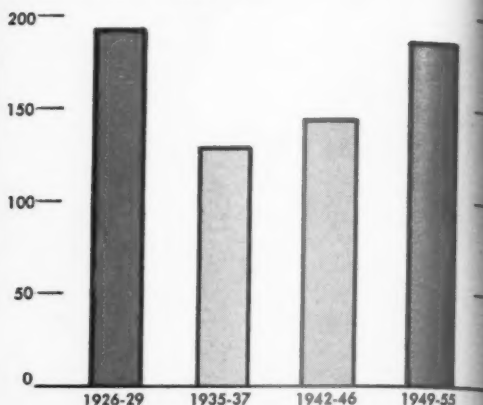
THE MARKETS

ALL BULL MARKETS ARE RISKY

Price Gains of Industrial Commons Since Mid-1949 Almost Equal Those of the Ill-Fated 1926-29 Bull Market...



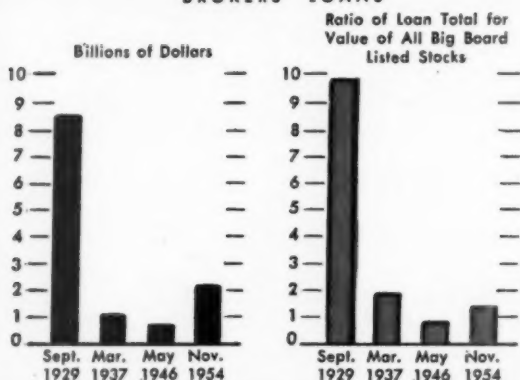
Bull Market Gains at Highs in Percent



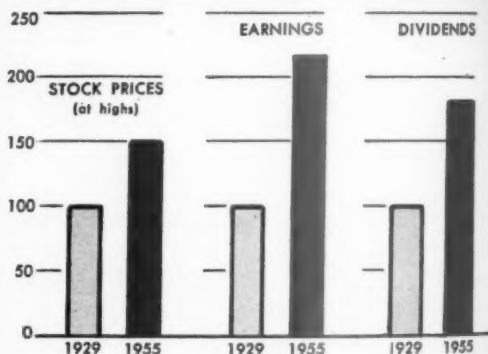
② This Bull Market Has Been Much More of a "Cash" Affair Than Most Previous Price Up-swing ...

③ Expansion in Earnings and Dividends Has Far Outstripped the 1929-55 Gain in the Industrial Index ...

BROKERS LOANS



Industrial Stock Prices, Earnings and Dividends (1929=100)



Data: Standard & Poor's Corp.; (Daily Industrial Stock Price and Other Indexes); New York Stock Exchange.

How High Can the Market Build

More and more, the layman is comparing the present bull market with the calamitous splurge of 1929.

The charts above cast considerable light on the validity of the comparison.

So does the market's behavior in the past couple of weeks.

• **Dive**—Last week, the New York Stock Exchange suffered the deepest price break since June, 1950, when

investors and traders threw a quick fit of jitters over the outbreak of the Korean War.

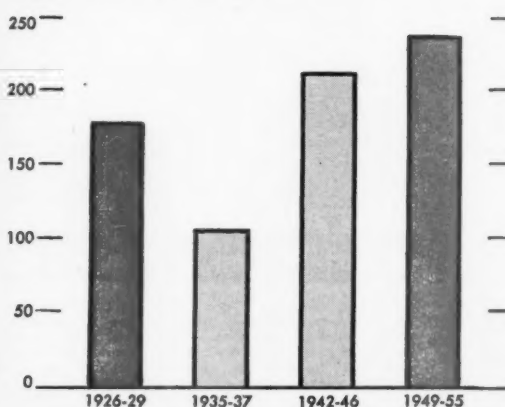
Trading volume, too, was massive. A week ago Thursday was the biggest

SKY BUT THEY'RE ALL DIFFERENT, TOO

... But If You Are Comparing 1955 With 1929 Don't Overlook These Other Sharply Different Basic Characteristics. For Instance:

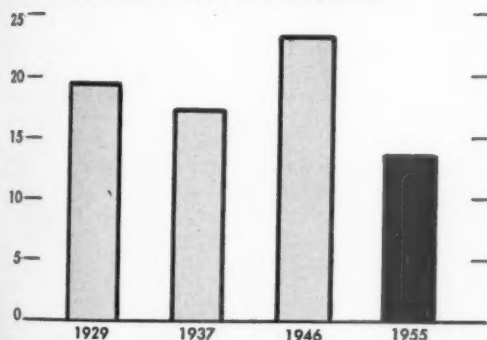
① The Rise Has Taken Longer Than Was the Case a Quarter-Century Ago ...

Length of Bull Markets in Weeks



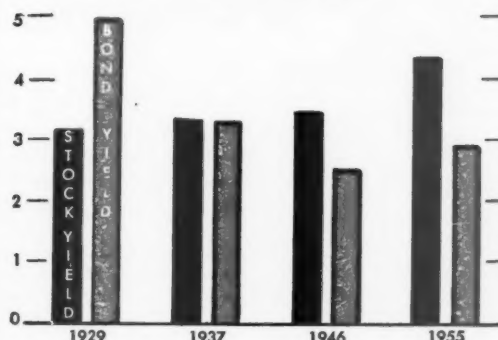
④ So Price-Earnings Ratios Are Still at Record Low Levels for a Bull Market ...

Price-Earnings Ratios at Bull Market Highs
(number of times stock prices cover earnings)



⑤ And There Is a Record Spread Between Common Stock and Bond Yields

Percent Yields at Bull Market Highs



©BUSINESS WEEK

ild on a Base Like This?

day since the temporary boom that followed Hitler's invasion of Poland in September, 1939.

And it was the biggest trading day on a falling market since the October af-

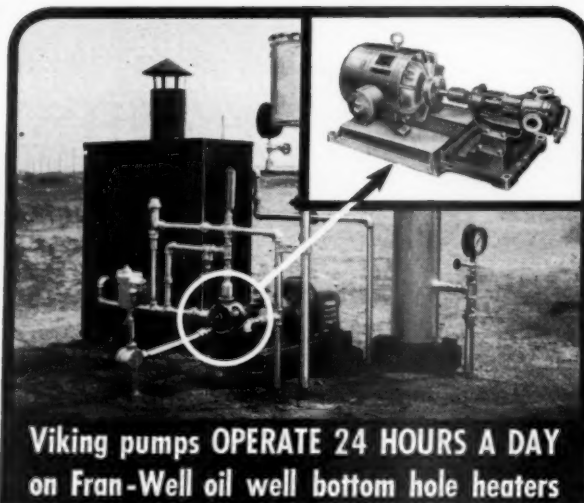
ter the 1937 bull market blew apart.

This heavy action was the market's first reaction to several pieces of news:

- The Federal Reserve Board hiked margin requirements from 50%

to 60% on stock purchases and short sales, after noting a sharp increase in the use of credit on the market (BW—Jan. 8 '55, p. 27).

• The Senate Banking & Currency Committee announced that it plans a fact-finding inquiry into the stock boom. Sen. William Fulbright (D., Ark.) in explaining the plan, said, "The



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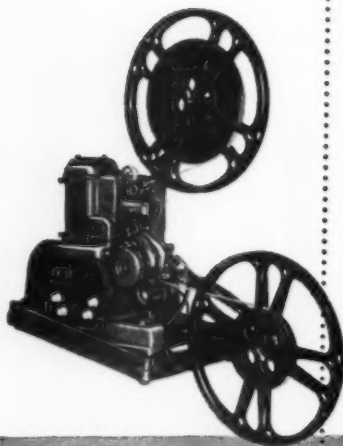
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situation looks very dangerous to me. It is too reminiscent of 1929."

• Speculators who had been expecting a stock split or dividend by General Motors, always one of the market's bellwethers, got a sudden disappointment when GM announced a new issue instead (page 120).

• Recovery—None of these actions and reactions fazed the market participants for long. The spasm of jitters ended almost as suddenly as it began. At its peak, it had generated a trading day of 5.3-million shares, and had washed away 18% of all the gain amassed since September, 1953, by Standard & Poor's daily industrial stock index.

But after three days the deluge vanished completely. At the end of last week, stocks generally had happily resumed their merry rallying. At the start of this week the same upward pattern was visible, though it quickly lost exuberance. By early in the week, S&P's industrial index had recovered about half of its loss; the rail and utility indexes had taken back even more lost ground.

• Strong or Weak?—Wall Street as usual has a varied batch of guesses as to what these violent swings mean.

The bulls naturally find the greatest significance in the strength of the rally. To them it bespeaks a mighty basic strength holding up the market's lofty price structure.

For the bears, the break itself is the thing. They find it a dramatic confirmation of their warnings that the market's foundations were being sapped by basic weaknesses. As for the rally, they poo-poo it as just one of those technical bounces that pop up briefly after periods of extreme weakness.

• No 1929 Pushover—Market observers of every complexion can get together on one thought: that Fulbright is way off target when he compares the present market to that of 1929. All hands have been hard at work comparing the characteristics of the two, as charted on pages 128 and 129. Up to now, they have rated the going market as a sturdier structure than the earlier house of cards.

To this cheerful view, the less optimistic add a footnote: The present market is no safe toy, even if it doesn't resemble 1929's stick of dynamite. No two bull markets are alike, they claim, and each one creates its own individual risks. And the present market has reached its personal risky stage, they believe.

• Speculation—For one thing more gambling has cropped up in the market than is generally admitted. Streeters now estimate that as much as 45% of all stock buying is being done on margin. That percentage takes on added weight when you consider that of the entire recent volume 20% has been the

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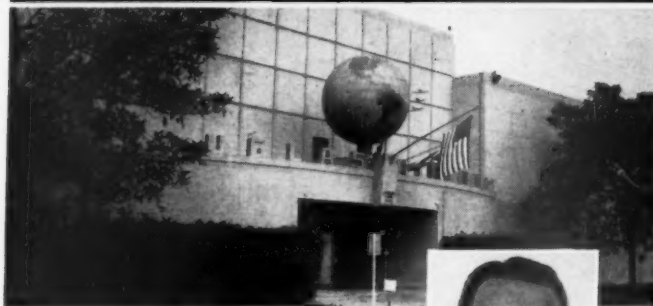
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cash operations of institutional investors and another 20% has been the trading of Big Board members for their own account.

At the same time, there has been an outburst of buying based on wild tips. You can see that in the gyrations in General Motors.

Or consider the Monday rush to buy a \$6.50 stock that had been plugged the night before by a television gossip. This stock opened some \$2 above its Friday close, on a block of 357,000 shares—about 12% of the entire amount outstanding.

Further evidence of the gambling spirit appears in the sharp increase in volume for the \$10-and-under shares, and in the \$10½ to \$20 range (BW—Jan. 1'55, p64).

The gloomiest seers also point to the avid buying of blue chips, which has been sending the yields of many such issues down to or well below those available on many government issues (BW—Dec. 4'54, p43).

• **Long-Term Buying**—This particular argument, though, brings a hot riposte. Most of these blue chips are being bought by institutions on a dollar-averaging basis, which means that their average cost is well below the present market level.

What's more, they are being bought for the long haul, with the expectation that their return will be much higher in a few years. Thus one analyst figures that five years from now dividend payments will be up 47% on today's 50 largest institutional stock holdings.

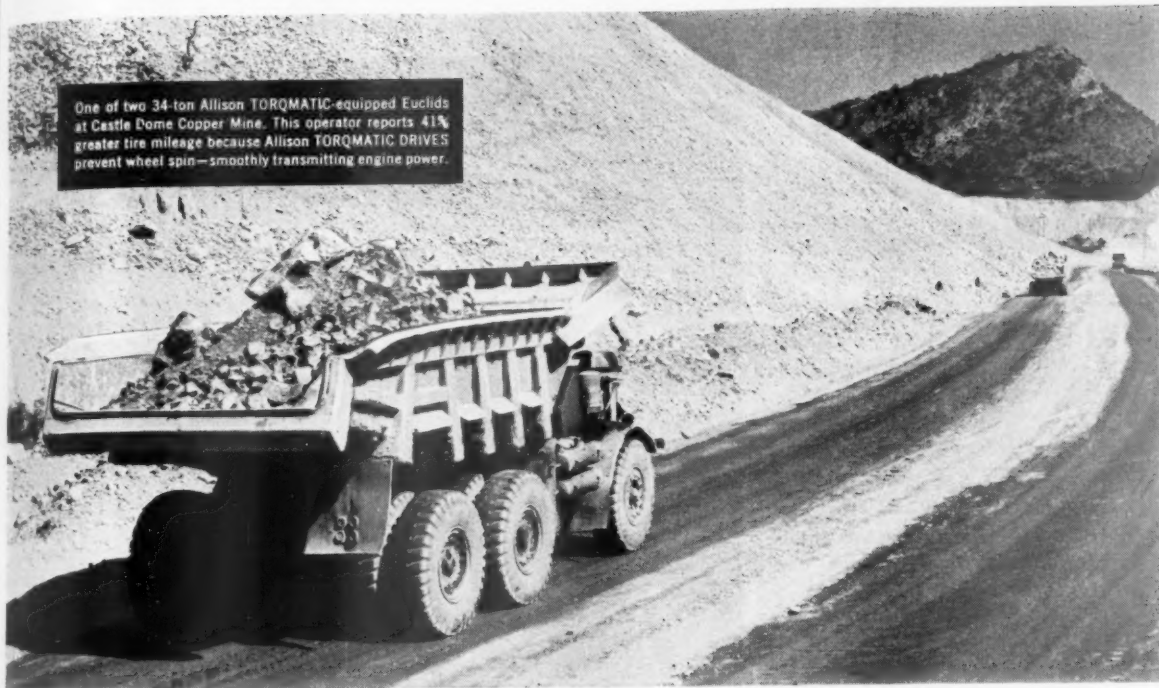
Thus while that group at current price levels offers holders an average yield of but 3.6%, that yield by 1960 on the same basis should have risen to the liberal 5.5% figure.

• **Crystal Balls**—Few observers, even the most sanguine, think the 1949-1955 bull market is currently set for another jaunt in the stratosphere. In fact, even the bulls devoutly hope that it won't. Most of them agree that there has been too much rise without a rest; they expect a time for digesting of earlier gains before the next upward burst—which they are sure will come.

Guessing has the usual wide range on how far the price shakeout will go. Many bulls would see without surprise a drop of 10% since a drop to that level they figure would assure a sound basis for the plunge through to a new high they foresee subsequently.

The bears tend to raise that percentage figure, and they expect a longer lag before recovery, if any. Notably, they are worried about the way Washington has been allowing bond yields to creep up lately. That kind of trend looks to them like poor fuel for stoking a bull market in stocks.

One of two 34-ton Allison TORQMATIC-equipped Euclids at Castle Dome Copper Mine. This operator reports 41% greater tire mileage because Allison TORQMATIC DRIVES prevent wheel spin—smoothly transmitting engine power.



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Castle Dome Copper Company reports it gets 17,000 miles per tire on off-highway trucks equipped with Allison TORQMATIC DRIVES compared to 12,000 miles per tire on mechanical-drive units. But increased tire life is only part of the story—the firm also reports the TORQMATIC-equipped "Eucs" have better availability and production records.

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TORQMATIC DRIVES smoothly transmit engine power—help prevent wheel spin that can quickly strip the tread from a tire. There's no clutch pedal to push and only three forward gearshifts—instead of the usual 7 or 10—handle all loads and grades. The matched converter-transmission team balances engine power and load demand, absorbs harmful drive-line

shocks, prevents damage to drive-line components, helps stop engine lugging.

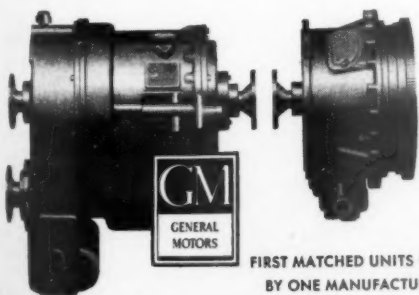
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Under Secy. of Labor Arthur Larson is carrying the ball for one part of Administration's labor program—promoting more state aid to the jobless and disabled. Eisenhower proposals for the District of Columbia are tipoff on Administration plans for . . .



Pushing State Action for Labor

While Pres. Eisenhower presses his labor legislation program in Congress to alter the Taft-Hartley Act and raise the federal minimum wage, his lieutenants will be promoting an equally important part of the Administration's labor plans in the 48 states.

The twofold package came to light officially last week in the President's State of the Union message. Most of the attention centered on T-H amendments and the proposed 90¢ minimum wage. Little notice went to a paragraph promising White House sponsorship of measures dealing with workmen's compensation, unemployment insurance, and nonoccupational disability payments.

Probably the reason this section escaped review was that it dealt solely with the District of Columbia, where Congress makes the laws. But it contained implications for all the states, and for the workers and businessmen who will bear the costs.

The idea behind the White House plans for the District is to set up model worker insurance laws as examples to the individual states. But the Administration will start pushing the worker insurance program at the state level even before District laws are written.

Improving insurance systems for the

worker has become a basic part of the Administration's labor philosophy. But where its federal programs deal for the most part with the employed workers, it regards the problems of jobless or disabled workers as falling to the states for solution.

• **Architect**—The official primarily responsible for taking the federal programs to the states is also the principal architect of those programs—Under Secy. of Labor Arthur Larson (picture). Since taking office last April, Larson has been carrying on a virtual one-man campaign to spell out the Administration's worker insurance policies. These policies finally received full blessing with Eisenhower's message last week.

Larson's expertise in the field of economic security for workers was the chief reason why Secy. of Labor James P. Mitchell recommended his appointment to Eisenhower. Working smoothly with the Under Secretary now, Mitchell has encouraged Larson to develop ideas without worrying about their political acceptability. Once Mitchell is convinced they're "right," it's his job to get them adopted as Administration policy.

The State of the Union message testifies to Mitchell's success in the division

of responsibilities he's assumed—success that had to be achieved in the face of some powerful opposition.

The two men make an effective, though contrasting, pair: Mitchell intense, volatile, Irish; Larson low-keyed, deliberate, Scandinavian.

• **Plans**—They complement each other, and share equal enthusiasm for these plans for action at the state level:

• **A raise in state unemployment insurance payments to a maximum of 50% of a worker's average wages for a duration of 26 weeks.** (Currently, state payments average \$25 a week, length of payments about 20 weeks.) The plan also calls for including workers now exempt from such benefits and adding new provisions such as retraining of the chronically unemployed.

• **A model workmen's compensation law that would liberalize benefits and extend coverage to on-the-job accidents and illnesses now exempt.** The plan, still incomplete, is to round up the best provisions of each state law into one package.

• **An insurance plan to reimburse workers who are injured in accidents off the job.** With only four states now providing by law for nonoccupational disability insurance, Larson describes the program as "today's fron-

ties" in the nation's income insurance system.

All of these programs fall within the province of the states. Unemployment insurance and workmen's compensation are paid for by state taxes on employer payrolls.

• **Models**—While the higher benefits and extended coverage that Larson is pressing would mean higher costs to business, he has not, as yet, spelled out the provision of these increased costs. This may show up when the model plans are set up for the District of Columbia. Specifically the Labor Dept. will seek from Congress (1) extension of the district unemployment insurance law, (2) a nonoccupational disability plan for workers in the nation's capitol, and (3) a liberalizing amendment for workmen's compensation for longshoremen and harbor workers who come under federal control because they work on both land and water.

• **Cautious**—This will be the Administration's direct approach to the insurance question. Its approach to the states to persuade them to follow along will be more cautious.

Larson is sensitive to the Administration's views on state authority. "It intends scrupulously," he says, "to respect the timehonored division of function between the states and the federal government in these legislative areas."

For that reason his approach is necessarily somewhat subtle. It involves a dual plan: setting up the model District of Columbia programs, and placing the department's services at the disposal of any state that becomes interested in reviewing its current laws, or adding new ones. The second part is important because department officials have, at times, drawn up insurance plans that were adopted in some smaller states.

There won't be any direct dealings with state legislators—although this year 44 legislatures are holding sessions. Federal lobbying in the states is considered too blunt a maneuver. But Larson may seek out state governors if opportunity arises.

• **Salesmen**—As an "insurance salesman" to the states, Larson's effectiveness is still in doubt: The practical results will show up throughout the year. For the past nine months, he has averaged about two speeches a week on the various programs, but these have been directed primarily at professional groups already curious or experienced in the field.

Larson's talks so far have been primarily philosophical, reflecting his professional background as a student of worker insurance and a college profes-



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sor. He came to his present post from the deanship of the University of Pittsburgh Law School.

His addresses have been well received, but it will take some hard politics to put through the Administration's plans for aiding the worker who is jobless because of economic or physical reasons. It's necessarily a long-range program because the individual states must provide the action, but Larson is laying the groundwork.

• **Philosophy**—His philosophy is basically simple. As he explains it, state insurance laws have created two classes of workers—those who are provided for as a result of union pressure or enlightened management; and the rest, who "must go to the poorhouse or relief office, beg from relatives, or starve."

While arguing for completeness in coverage of workers, Larson claims that present laws do not provide enough help even for those who are covered. The worker receiving jobless benefits frequently must forfeit goods being bought on the installment plan, or perhaps lose his home. The employee who seeks compensation for an on-the-job injury may have an accident not covered by the law, while the employee injured or disabled off the job has little chance of avoiding relief.

He also points out that most state laws would rule out jobless benefits to a newly injured person who could not fulfill the requirement of "looking for work."

• **Coming to a Head**—The Larson programs aren't new; many states have considered adopting such measures for years. But with the Eisenhower Administration behind them, the issues will be brought to a head. That means that opposition as well as support will be stirred up.

Labor unions, for instance, are strongly behind the drives—but argue that if the Administration believes in the aims, it should seek federal legislation to do the trick. To answer this, Larson says, "I have to explain our philosophy of states' rights."

Management groups are also concerned about adequate protection of workers—but are cognizant of the possible increased costs to employers.

• **Challenge**—Although primarily an educator, Larson is not inexperienced in the ways of government. During World War II, he left a law office and teacher's post to serve first in the Office of Price Administration as an economist, and later as an expert on Norway in the Foreign Economic Administration.

As Under Secretary, Larson also has responsibility for managing the department. Here, perhaps, his technical training and his role in promoting the

insurance programs have kept him from carrying out all the administrative duties that the No. 2 department position requires.

But Larson's authority to work out and promote social legislation for the Administration is his paramount challenge. Although aware that this is a long-range drive, he foresees eventual attainment of the goal of insuring against wage-loss to unemployed and disabled workers.

"I think there is a certain inner logic in systems of this kind that must eventually work itself out," he says. "Deficiencies in our administration of things will not go on forever."

Rubber Leads Parade In 1955's Bargaining

The new year's contract bargaining, which currently gives signs of being rougher than that of 1954, opened in Cincinnati this week. Goodyear Tire & Rubber Co., which has a contract expiring next month, met with the United Rubber Workers (CIO) to begin drafting a new companywide agreement.

Last year, URW asked for a guaranteed annual wage in negotiations with a number of major rubber companies, but the demand was never pressed strongly. Again, an annual wage proposal will be put before management, but very likely only for bargaining purposes—there does not now seem to be a militant interest in a guarantee.

• **Six Hours**—URW's real pressure may be on another issue, peculiar to the rubber industry: the six-hour day that is standard in major rubber plants in the Akron area, but so far not in effect for plants in other areas.

For months, URW spokesmen have been arguing that the six-hour day should be made standard for the entire industry. URW wants to spread work where a longer day is now in effect, and to end what it describes as an operating advantage for out-of-Akron plants—one the union blames for the shifting of work from Akron to southern plants.

URW also wants increased pensions, longer paid vacations, and larger hospitalization, medical, and surgical benefits financed by employers.

Inevitably, there will be a wage demand, too, but URW hasn't hinted—yet—about how much it will ask. The union said this week that its wage policy committee will meet shortly to outline pay proposals to Goodyear and, later in the year, to General Tire & Rubber Co., U.S. Rubber Co., and other major employers.

Union Merger

It's still on. Lawyers are drawing up AFL-CIO marriage contract now. It will be studied next month.

Merger of the AFL and CIO is now in the hands of attorneys. The principals, after settling their differences, are ready to sign the papers.

This week, the document that will join 15-million union members into a single "trade union center" is being argued and drafted by general counsels Arthur Goldberg of the CIO and Albert Woll of the AFL. It will be the basis for review and debate by unity teams that will meet in Miami three weeks hence.

•Not Yet, But Soon—The Florida meeting won't be the scene of the long-awaited marriage ceremony. There are too many problems to settle before the two labor federations can finally join forces. However, unification seems likely to come sometime this year.

Final hurdles have been cleared so that action can take over from conversation. Last week, merger proponents George Meany of the AFL and Walter Reuther of the CIO conferred with their lieutenants who are also leaders of major AFL and CIO affiliates. It was a session to reaffirm good faith.

•Misgivings—The session, held in a downtown Washington hotel, aired some AFL doubts over CIO leaders' real interest in ending the 18-year split. A merger would, in effect, bring CIO unions into the AFL stronghold. But Meany was assured that the CIO was prepared to go through with unity.

AFL's misgivings stemmed from two factors:

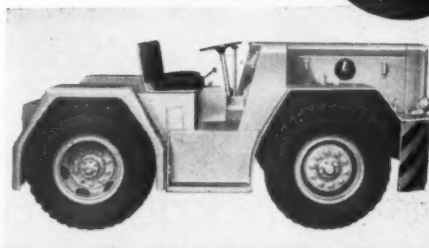
•Reports from the CIO convention in Los Angeles last month that Reuther was setting up new barriers to merger by warning that corruption, segregation, and "business unionism" must be kept out of a unified AFL-CIO; this was interpreted as criticism of AFL (BW—Dec. 11 '54, p. 120).

•Reuther's desire to have AFL and CIO work out separate master plans for unity, to be negotiated to solution by the merger committees.

•Reassurance—On the first point, Reuther assured Meany that these problems, which he did not discount, were issues that could be handled later; he said that CIO would not insist on an entire cleanup of the labor movement before joining forces. The second was solved by accepting Meany's requirement that AFL-CIO teams work out the unity plan jointly.

With these points out of the way, the committees decided to set a Feb. 8

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ate in Miami—following the AFL executive council meeting—for subcommittees to meet to consider the working paper prepared by the lawyers. Full unity committees will study the draft the next day.

If Meany wanted a final CIO test of good faith, he got it when Reuther

and his aides agreed to meet with the AFL in Miami. It will be Reuther's first visit to a city that has played host to the AFL executive committee for many winter meetings—sessions that used to bring caustic comments from CIO officials about their AFL counterparts going south for working sessions.



LONGSHOREMEN must apply for dock jobs or lose the right to work there. It's a . . .

Crackdown on Casual Workers

The New York Waterfront Commission is pruning 15,000 from its register—barring them from jobs. It's an effort to make steadier work for full-time men.

The Waterfront Commission of New York Harbor prepared this week to cancel the registration of up to 15,000 longshoremen—barring them from dock jobs—in what is believed to be the first peacetime effort by a governmental body in this country to stabilize work.

Acting under the New York-New Jersey Waterfront Commission Compact of 1953, the commission announced two weeks ago that it planned to strike from dock rolls:

- 8,300 men registered as longshoremen who neither worked nor applied for work at any time during the six months ended Dec. 31.

- 6,500 others who worked occasionally during the period, but failed to meet the minimum number of 48 days that a longshoreman must work, or be available to work, to stay on the job roll.

During the last two weeks, the commission has been considering special

cases. It is now about ready to put its order into effect, removing the deadwood and the casual workers who, according to the commission, "do not have a real stake in the waterfront" but, by working part-time, make it harder for those "genuinely striving to secure longshore employment."

One of the principal sources of crime and unrest on the waterfront is an oversupply of labor, experts believe.

"Such an imbalance [40,000 longshoremen registered for 15,000 to 20,000 jobs] breeds crime, kickbacks, and corruption and leaves many honest men with empty pockets," according to Samuel M. Lane, executive director of the commission.

- **British Example**—The program under way in New York and New Jersey has precedent on the British docks.

The economic waste and social loss inherent in casual dock labor have been under attack in Great Britain since the

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How many bottlenecks do you have?

How many valves are involved in your plant operation? How many are really dependable?

Actually it's here in the piping where many a production bottleneck hides. And it isn't just the major breakdowns that affect your production. Those little but frequent shutdowns for maintenance mean a down machine here, a slowed-up operation there—important losses when you add them up.

Here, then, is one place where top-quality equipment belongs... stronger, longer lasting valves and fittings that require a minimum of maintenance. And to the thrifty buyer, that means Crane valves and fittings, proved more suitable, more dependable year after year—in plant after plant.

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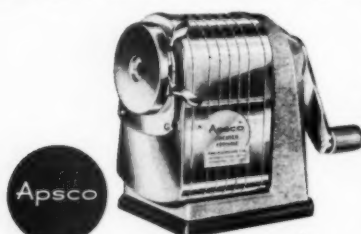
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late 1800s. First efforts to decasualize dock work were made in London in 1909, unsuccessfully. Other attempts were made, with similar lack of results, until manpower became a national problem in World War II.

During the war, the government used its broad powers to mobilize and allocate manpower. Part of its program was a decasualization order applying to British docks, which relieved—but did not end—a longshoring labor surplus. The wartime labor order was scheduled to expire in mid-1947. The political victory of the Labor Party, long an advocate of a law to end casual employment, led to replacing the wartime order by the Dock Workers Act of 1946, establishing a permanent system for organizing and regulating the hiring of workers in Britain's ports.

• **Not Quite the Same**—While there are similarities in the British and the New York-New Jersey programs, there are also significant differences. In Britain, the problem is simply that too many men want to get their full livelihood from too few jobs. In New York harbor, there is also a surplus of men wanting full-time employment on the docks, but the problem is more one of "casuals"—men such as off-duty policemen, firemen, truck or cab drivers, college students, or others interested merely in adding to income.

There is a second major difference between the British and the New York harbor programs. On British docks, a decasualization program is backed up by a national program of social benefits—including wage guarantees—that New York harbor can't offset.

For these reasons, the Waterfront Commission of New York Harbor was largely charting a new course when it undertook its program to regularize dock jobs.

• **Technique**—When it registered longshoremen, under provisions of the compact, the commission was required to accept on its rolls all applicants except (1) those deemed undesirable because of criminal records, and (2) those whose presence on the docks would constitute a public hazard.

Lacking other rights to limit registrations, the commission accepted some 40,000 men for its job roll—nearly three times the 15,000 needed for jobs on an average day and twice the 20,000 required at peak demand. Conferences held with unions, shippers, and others familiar with waterfront manpower requirements set a 25,000-man labor force as ideal. That's the figure at which the commission would like to stabilize dock employment.

• **Cutting Back**—The commission is required by law to prune the deadwood from the register at six-month intervals, beginning the first of this year.

Most of the 8,300 being lopped off

for not working at all are considered by the commission to be men who registered unnecessarily—such as dock carpenters and other craftsmen—just be on the safe side if a job cracks broadened. Many of the number working regularly on the docks, but as longshoremen.

Cutting the 8,300 off the roll won't put extra pay into any pocket—it's simply a consolidation of the register. However, the case of the 6,000 others is considerably different. These are workers who held longshoring at some time or other during the six-month period, but did not work or apply for work through commission hiring halls on the minimum 48 days—and who can give no valid reason, such as injuries or illness, for failing to do so.

How many of these men are employed elsewhere isn't known, but the commission estimates that a substantial number are extra-job men. Pruning them from the roll will create more days of employment for men who want to work regularly on the waterfront, the commission says. It can't estimate how many more days' work and pay will be available, but the total could run well over 100,000 days to be spread among men trying to get established as regular workers on the waterfront.

• **Works Both Ways**—Eliminating 15,000 names from the longshoremen's register might seem to bring the total of 40,000 down near the ideal 25,000—but new registrations are being received at a rate of about 100 a week, so the total roll will continue rising.

Moreover, while those lopped off are barred from re-registering for one year, according to the commission there is a steady stream of other occasional-work applicants coming into hiring halls.

The rule permitting names to be struck from the registration roll applies only to those listed on a given date prior to the start of each six-month period (for the July 1-Dec. 31 period, the date was Apr. 1) so the newcomer casuals can't be eliminated for possibly as long as nine months. Hence, the roll can't be purged entirely of part-time men.

This may be changed later, the commission indicates, if the present program fails to do a good enough job of regularizing employment. The commission has the right to set tighter rules for staying on the job rolls when it considers them necessary.

Meanwhile, the commission—charting new legal ground in the job-control program—fully expects a court test of its right to bar men from working on the docks solely because they haven't worked steadily enough. There's no precedent, but the commission so far has won court support for its registration program and for other parts of its licensing and harbor regulations.

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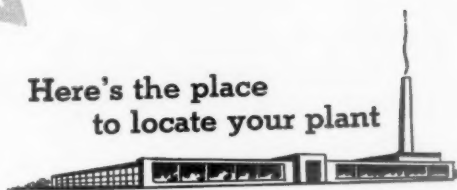
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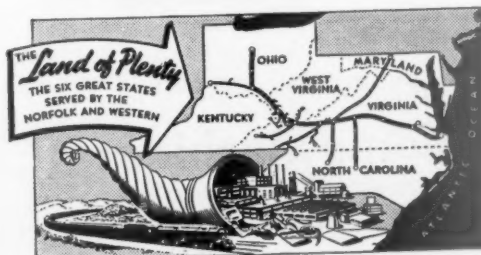
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In the *Land of Plenty* there are many plant sites ideal for many types and all sizes of industry. They offer the natural and man-made advantages which put a factory out in front in the combined processes of manufacture and distribution. If you would like to have complete information about specific *Land of Plenty* sites favorable to your particular operation, let the Norfolk and Western's plant location specialists know your requirements. There's no obligation — and all information will be provided in confidence. *Just write, wire or call —*

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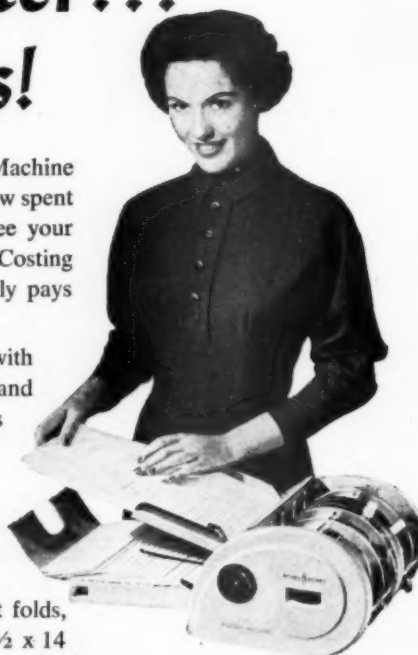
Office folding machine little larger than a typewriter... & costs less!

● This Pitney-Bowes Folding Machine will save any office the hours now spent in costly hand folding—will free your girls for more important jobs. Costing less than a typewriter, it quickly pays for itself in even a small office.

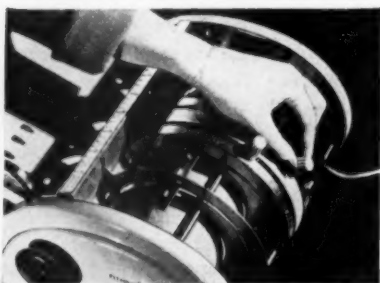
● The FH, electrically driven, with semi-automatic feed, is fast and accurate. It can make two folds at once—and double-fold letter sheets up to 5,000 per hour! (Automatic feed optional at slight extra cost.) Even folds sheets stapled together.

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LABOR BRIEFS

Don't delay filing unfair labor practice charges because the Taft-Hartley machinery for processing them is stalled (BW—Jan. 8 '55, p. 50). Arthur Goldberg, CIO general counsel, so advised unions last week. Goldberg pointed out there is a six-month time limit on filing charges, so postponing action until a new Taft-Hartley general counsel is confirmed could be risky. His advice is cogent to employers as well.

New Fotosetter—one of several photographic types of composing machines now being introduced into the printing industry—is expected to come under the joint jurisdiction of AFL's International Typographical Union and International Photo-Engravers Union. Two officers of the two internationals worked out a formula for sharing jurisdiction last week after the Milwaukee Journal leased a Fotosetter from Intertype Corp., of Brooklyn.

A job dispute between residents of Beaver County, Pa., and out-of-state employees of Nello L. Teer Co., Durham, N. C., halted an Aliquippa (Pa.) hillside grading job last week. Residents, supported by AFL construction unions, demanded that Teer hire unemployed Beaver County residents for the project. Teer, whose company has a contract with the United Construction Workers, affiliated with John L. Lewis' United Mine Workers, denied that the real issue was local work; he called it "a definite jurisdictional issue" and an illegal AFL effort to oust UCW from the job.

Dock peace for two years is possible in New York. Members of the International Longshoremen's Assn. voted 11,572 to 4,222 last week for a new contract with a no-strike clause. The agreement, similar to one rejected a month earlier, includes a "package" 17¢ pay boost over a two-year period, a union-shop clause that will hamper AFL efforts to oust ILA, and other concessions.

A 3¢-an-hour raise now, and 4¢ more Oct. 1, brought a 13-week strike by CIO steelworkers at Jaeger Machine Co., Columbus, O., to an end. Jaeger's 500 employees will also get a 5¢ raise Jan. 1, 1957, under the new agreement—or, as an alternative, the union may reopen the contract on wages.

Rail wage talks between carriers and the Brotherhood of Locomotive Firemen & Enginemen reopen this week. The union asked for a 28¢-an-hour raise for its 100,000 members.

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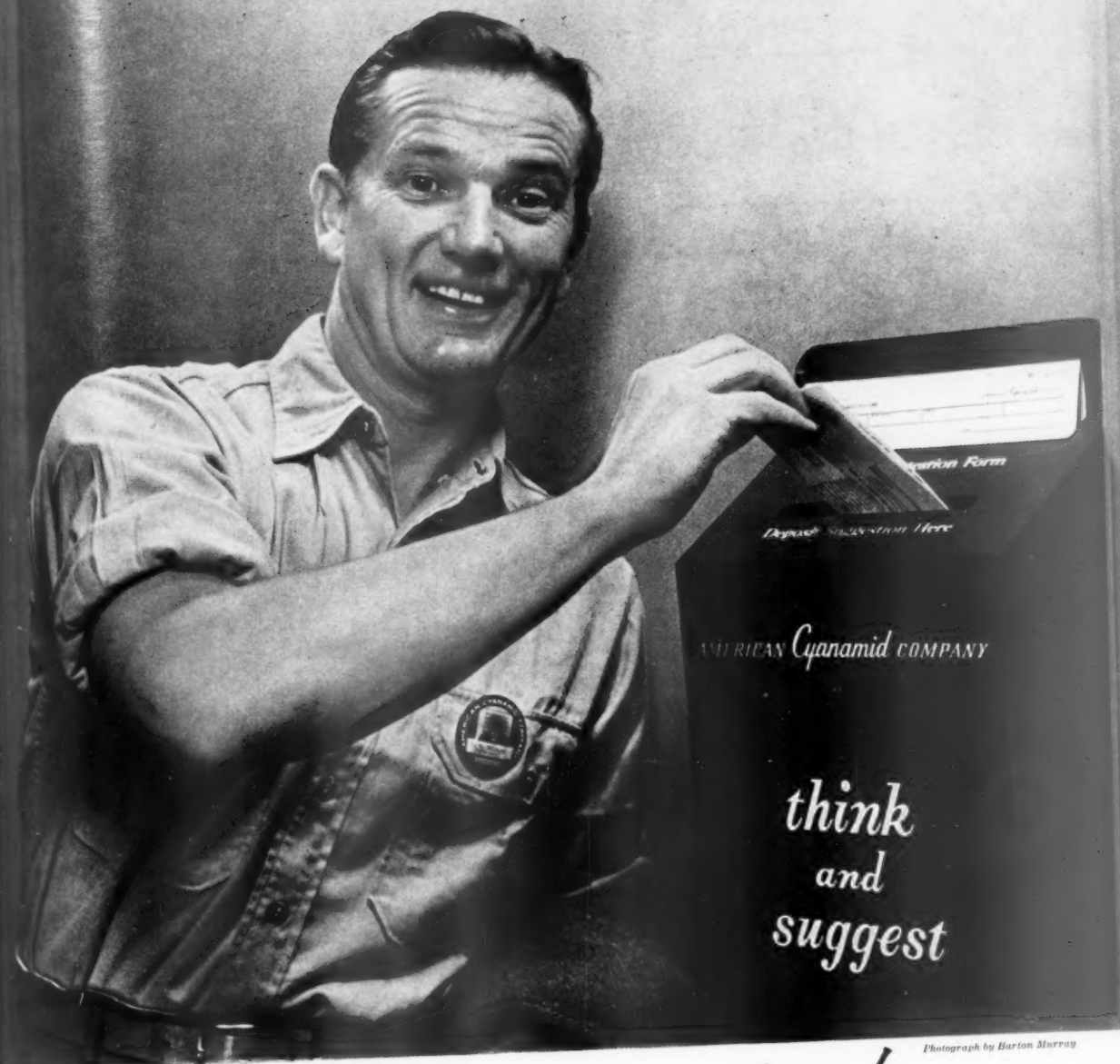
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15, 1955



Photograph by Barton Murray

It's a great idea!

Of all the ideas to spring from American ingenuity, one of the most stimulating is the "idea for encouraging new ideas"—the suggestion box itself.

How successful this idea can be is shown by the results of American Cyanamid's company-wide Suggestion Plan. In the past three and a half years it has brought forth nearly 85,000 ideas — an average of 112 for every 100 employees each year! Almost 20,000 of these ideas, for which employees received nearly a quarter of a million dollars in cash awards, have been adopted — with tangible benefits to customers as well as to employees and the company.

For example, customers profit from ideas that are constantly improving Cyanamid products and services. Employees, from ideas that increase safety, improve working conditions, make for greater job satisfaction. And the company benefits from suggestions that increase efficiency, lower costs, improve methods and processes.

Cyanamid is proud of its employees' enthusiastic response to the Suggestion Plan. It is a *great* idea — one of the factors that helps Cyanamid give increasingly better chemical service to industry and the public.



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Pittsburgh COLOR DYNAMICS

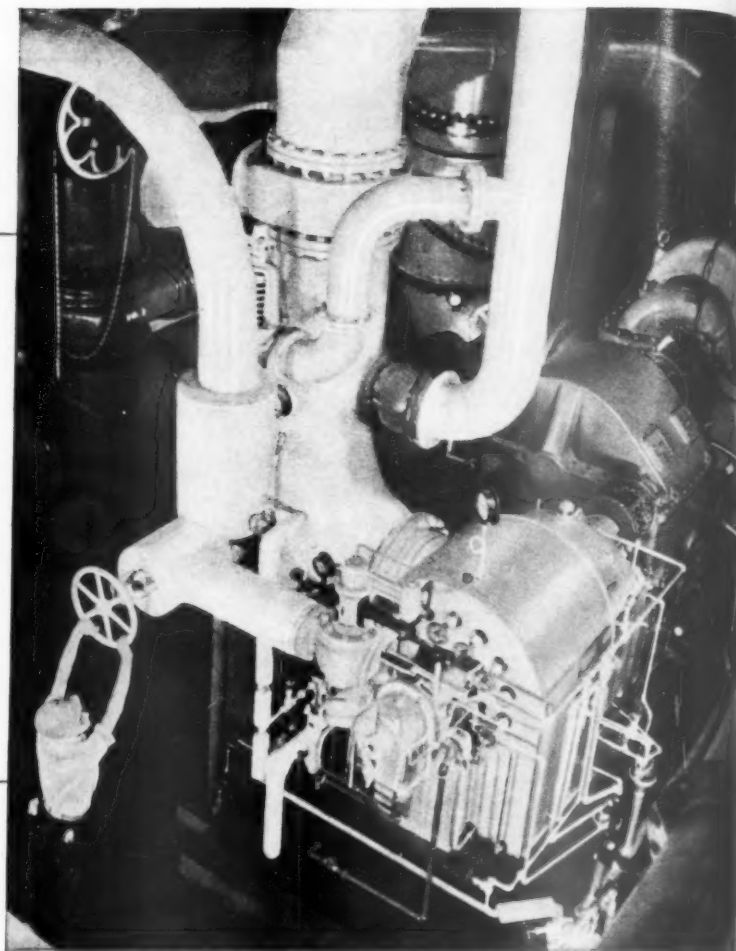
Helps Improve Safety Record 400% in Steel Mill!

Putting color to work in Jones & Laughlin's cold finishing department increases safety record from 1,027,000 man-hours without time-loss accidents to an all-time high of 4,858,579!

By MAKING workers more safety conscious, focusing their attention and minimizing fatigue, Pittsburgh COLOR DYNAMICS has helped to lower the accident rate phenomenally in the cold finishing department of the Pittsburgh Works of the Jones & Laughlin Steel Corporation.

During the time this department was painted according to ordinary shop practice, its best safety record was 1,027,000 man-hours without a lost-time accident. Since being repainted according to COLOR DYNAMICS, its safety record has zoomed to an all-time high of 4,858,579 hours. *An increase in safety of nearly 400%!*

"Naturally, we are very pleased with such improvement in our workers' safety," comments Superintendent Joe Seyler, of the mill's cold finishing department. "But we believe



Forests of huge pipes in pump and boiler houses of J & L's Pittsburgh Works are easier to identify since pump lines were painted in dark green with black bands, and vacuum lines in yellow with bands of green and white.

that this is just one of many benefits that have resulted from putting color to work the COLOR DYNAMICS way. By using eye-rest colors on stationary or non-critical parts of machines we have made these areas seem to recede. By contrast, moving or critical parts have been made to stand out. Our operators see their jobs better. With less eye strain there is less fatigue, and lessened fatigue results in more and better productivity.

"Eye-rest and morale-building colors on walls and ceilings have

provided more pleasing surroundings that have enhanced the morale of our workers. They take pride in keeping their work areas cleaner and more orderly, thus simplifying housekeeping. And we get all these benefits without paying any more than conventional maintenance painting has cost us."

Why not test the practical value of COLOR DYNAMICS in your plant? Paint a machine—or a department or two—and see the difference it makes in efficiency, morale and safety.

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● Send for our free book which explains simply and clearly what COLOR DYNAMICS is and presents scores of practical suggestions on how to apply its principles. Better still, call your

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PERSONAL BUSINESS

BUSINESS WEEK

JAN. 15, 1955

A BUSINESS WEEK

SERVICE

It's time for you to give some thought to the problem of juvenile delinquency. Sooner or later it's almost sure to affect you—directly as a parent, or indirectly as a community member.

The stories in your daily paper are not exaggerated. Juvenile delinquency is at an all-time high. And it is breaking over class lines. It's no longer limited to underprivileged urban areas. Incidence is rising sharply in the smaller towns and suburbs.

Also, there has been an ominous shift in its character—from petty and mischievous offenses to crimes of major violence.

On the other hand, you can overestimate the dangers, too. The fact is that only an average of about 3.5 out of every 100 minors have serious behavior problems. The number of delinquents is even smaller.

Nevertheless, even this ratio is high in comparison with previous periods. What has brought it about?

The answer doesn't come easy even to the experts. But one over-all reason is that it's an inevitable consequence of World War II, the Korean War, and today's cold and uneasy peace.

(A word of warning first of all: Beware of scapegoats. The problem isn't so simple that it can be laid at the door of comic books, television, or some specific personal prejudice. Juvenile delinquency is as complex as society itself.)

On one thing the experts agree to a man. In every instance a child's difficulties must be traced back to their roots: home and parents. The best of all buffers between a child and delinquency is a secure and loving family who gives him the chances—and helps him—to develop his own best interests.

The soaring crime rate among teen-agers bears this out. Often their delinquency is due to parents underestimating their maturity. Authorities claim that today's teen-ager is likely to be far more of an adult than his parents were at the same age. He wants to manage his own affairs—and he's capable of doing it.

Moreover, he wants the respect that goes with responsibility. If his parents won't give it to him, he may turn to a gang that will.

Experts point to a second area of misunderstanding: Parents sometimes forget the great number of authorities (who can't be contradicted) that fence in childhood and adolescence. Friends, school, family, community customs, and law all exert pressure to conform.

Kids, like adults, get fed up with authority. Unlike adults, they seldom fight back in moderation. Problem children can find only one way to let off steam: rebellion against all authority. It's up to parents to watch out for such reactions.

This points up the fact that children want and need guidance. Rules have to be laid out as to what opportunities are and are not available to them.

But the trouble these days is that there is often loose and faltering communication between parents and their children. That weakens or destroys the necessary guidance. The same thing applies to the sometimes shocking lack of liaison between individual families and community resources.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
JAN. 15, 1955

Don't assume that living in an upper-class community exempts you from the problem of juvenile delinquency. Suburban areas are growing so fast that, almost overnight, they become little cities in themselves. Result: All the facilities a community needs to prevent delinquency fail to keep pace.

Seeing projected community improvements through is neither cheap nor easy. They require sustained individual effort and, usually, an increased local tax rate.

Finally, you yourself may be faced with the emotional breakdown of a child or adolescent. If that happens, make prompt and full use of the resources—community and private—available to you. There are many reasons for such a breakdown, and you'll need skillful help to get at them.

—●—
If you're thinking of buying a painting from a successful late 19th or early 20th Century school, you may find it a more difficult—and expensive—matter than you've counted on.

James Thrall Soby, in an appraisal of the current art market, states flatly that there just are not enough five-star works of art to go around.

And, since the war, prices for such masters as Matisse, Picasso, Rouault, and Bonnard have tripled or quadrupled.

The increase has been even greater in proportion for some of their less-renowned contemporaries.

For example: Paul Klees's paintings, which used to cost less than \$500, are now 10 times the price—and going up. A Kandinsky costing less than \$1,000 in 1930 would now bring about \$8,000.

Writing in the Saturday Review, Soby gives two basic reasons for this tremendous boom in the modern-art market:

- Art museums have permanently removed many of the best paintings and works of sculpture from the market.
- There is intense competition on an international level for what is still in circulation.

—●—
Big-game hunters can now enjoy their sport without suffering from badly bruised shoulders, according to Remington Arms Co. It claims its new Model 470 has the softest recoil ever achieved in a lightweight, high-powered sporting arm.

The gun has a gas-operated action that has the effect of driving the rifle forward when it is fired—just enough to offset kick. It weighs only 7½ lb., uses a 30-06 cartridge.

—●—
Added note on the credit-card boom: This year's Sheraton hotel credit cards will be good for charging privileges in about 100 retail stores. They are also good not only in the company's 30 hotels, but in a number of other hotels in the U. S. and Canada.

—●—
Don't go on a salt-free diet to lose weight unless your doctor orders it. For one thing, you probably won't lose much fatty tissue, if any. More important, it can be dangerous to life and health, since salt is essential to normal body function.



"That's a load off our shoulders!"

say dockmen about U. S. Rubber **H-1515** hose

Handling conventional oil-dock hose is not a job for weaklings. The hose is bulky, heavy, stiff—difficult to handle and hoist. United States Rubber Company engineers thought this was doing it the hard way. They came up with U.S. Amazon® Hose H-1515—2/3 lighter in weight, highly flexible. That's why dock workers are cheering.

Executives of oil companies, barge and towing lines are cheering, too, but for additional reasons. U.S. Amazon H-1515 is so easy to handle that it sharply reduces make-up time to the header. Its light weight and ease of handling have sharply

reduced accidents. As for durability, U. S. Amazon, despite its light weight, can take rough treatment without damage.

This hose makes all other oil-dock hose obsolete. It has been thoroughly proven by four years of Navy service, and three years of oil company service. It is now used by every major oil company in America and most foreign countries. H-1515 Dock Hose is made only by United States Rubber Company and sold through any of the 27 "U. S." District Sales Offices. Further information is obtainable by writing to address below.

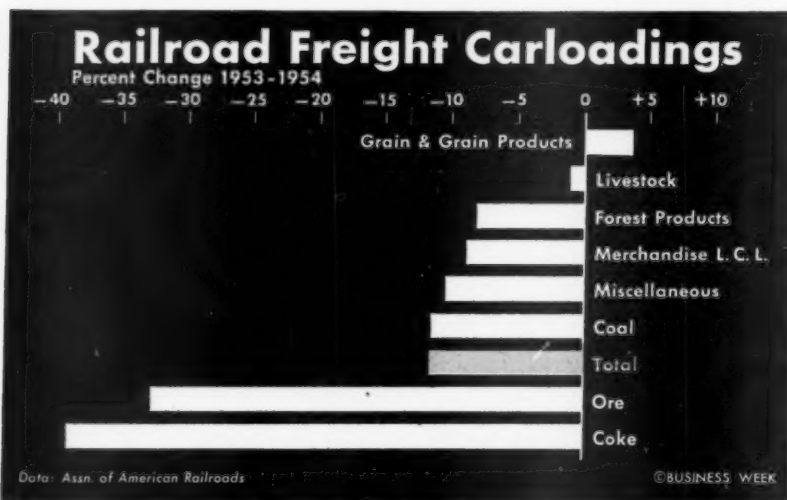


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CHARTS OF THE WEEK

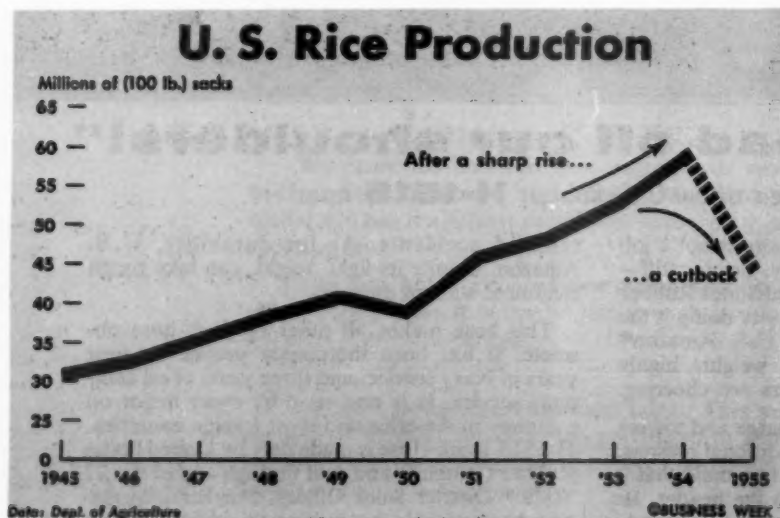


Coke and Ore Dragged Hardest

Freight carloadings of Class I railroads declined 11.6% from 1953 to 1954. Of the major groups of products shipped, only grain and grain products registered an increase in the number of cars loaded in 1954. Biggest losses were rolled up for ore and coke. They slipped 32.8% and 39.1% respectively.

Coal, its production lagging — notably in the early part of the year —

was a large factor in the decline. Coal loading makes up about one-sixth of the total freight loaded; hence, it contributes heavily to the yearly welfare of carloadings as a whole. Ore shipments — down in 1954 because of a low steel operating rate — declined by one-third, or by more than a million cars. This drop made up almost a quarter of the total 4.4-million-car decline.



An Increase That Went Too Far

During World War II, when exports from Asia were cut off, the U.S. found it necessary to increase its rice produc-

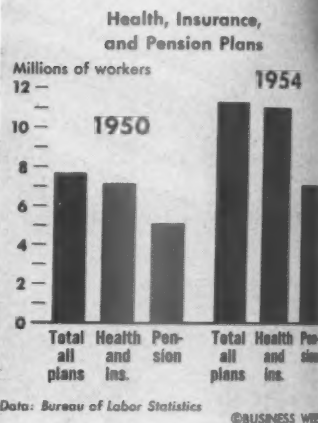
tion. The production has kept right on increasing ever since.

Now, in an effort to move the huge

supplies of rice, Agriculture Secy. Benson has ordered growers to cut back the 1955 plantings by almost 25% — from 2,467,000 to 1,859,099 acres. This is the first acreage allotment in five years. The cutback would bring 1955 production to around 44-million hundredweight, 25% below estimated 1954 production of 59-million hundredweight. Production in 1954 was about two-and-one-half times the average of the prewar 1935-39 period.

Farmers will have an opportunity to vote on marketing quotas for their rice crop in a referendum to be held Jan. 28. Two-thirds approval by the growers is required before the marketing quotas can go into effect.

Workers Under Benefit Plans



More Each Year

Health, insurance, and pension plans are reaching out to more and more workers as interest increases in employee benefits. This is demonstrated in a survey by the Bureau of Labor Statistics.

In the period from 1950 to 1954, the number of workers covered by some type of health, insurance, or pension plan under collective bargaining rose from 7.7-million to 11.3-million — an increase of 48%. Of this number, 11-million were covered by health and insurance plans in 1955 — representing a 56% increase in the past four years.

For most of the workers, premiums for these health plans were borne entirely by employers. On pension plans, the survey showed that approximately 85% of the workers did not have to bear any of the cost.

SOUND CONDITIONING



Concentration is made easier in these private offices by the beautiful, sound-deadening ceiling of Armstrong Travertone®. The acoustical efficiency of Travertone is particularly welcome when the folding door is opened to convert the area into a conference room.



To provide a decorative contrast to the main ceiling area, the Travertone under the soffit is painted a light blue. Travertone can be repainted and washed frequently without impairing its acoustical efficiency. Result: this carpet company . . .

Floors Noise with Beautiful Ceilings

Many showrooms are lively scenes of confusion during market weeks. But the bustling crowds of buyers and distributors who visit the Roxbury Carpet Company's New York showroom find a quiet atmosphere in keeping with the quality merchandise on display.

An acoustical ceiling of Armstrong Travertone deserves most of the credit for this pleasing quiet. Its fibrous mineral wool composition absorbs up to 75% of the sounds

that strike it and prevents noise from building to disturbing levels.

In addition to soaking up noise, Travertone makes the showroom more attractive. Its textured surface blends well with the redwood paneling and sandalwood colored walls. Suspended from the old ceiling, Travertone hides unsightly beams and pipes.

Maintenance of a Travertone ceiling is both easy and economical. Travertone can be washed or re-

painted whenever desired without loss of acoustical effectiveness. And Travertone is completely fire safe, meets the strictest building codes.

You can get full information on Travertone and the entire line of Armstrong sound-conditioning materials from your Armstrong acoustical contractor. For your copy of the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4201 Indian Road, Lancaster, Pennsylvania.

* Trade-Mark

Armstrong ACOUSTICAL MATERIALS

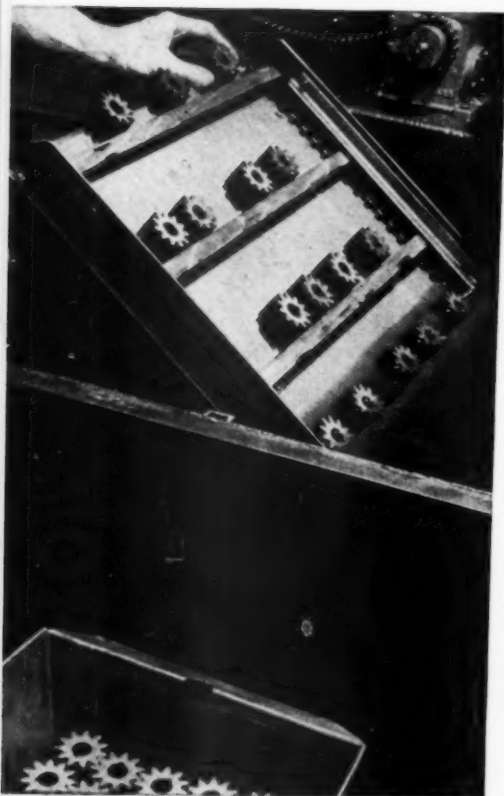
Cushiontone® • Travertone • Arrestone® • Minatone® • Corkoustic®

For the past year Hydreco Div. of New York Air Brake Co. has been selling pumps equipped with gears made from powdered metal. Two companies—Vanadium Alloys and Keystone Carbon developed the process.



Vanadium starts by breaking molten metal into particles with water jet

High-Strength Powder



OIL BATH was Keystone's answer to the problem of cooling the gears without deforming.

The pictures above show how two companies are managing the first commercial production of extra-high-strength gears from powdered alloy steel. The companies—Vanadium Alloys Steel Co. and Keystone Carbon Co.—are making the gears at a substantial saving for the Hydreco Div. of New York Air Brake Co.

• **Method**—In Vanadium's part of the process (picture, above), metal of the desired composition is melted and then poured into a box containing a rapidly whirling jet of water. The water hitting the metal breaks it up into tiny particles that fall to the bottom of the box. From here, the particles go through various stages of drying, sorting, and straining until they form a dry powder. Vanadium says that this powder compares favorably in price with similar batches of electrolytic iron.

Keystone's part of the process consists in forming the powder under terrific pressures—150 tons psi.—in a press (picture, above, right). The pressed form (which looks like solid metal but might crumble in your hands) is baked, pressed again, baked a second time, and finally cooled.

• **Problems**—Though the operation is essentially a simple one, there are a number of practical problems with which Keystone must deal. Press size is one. Although Keystone's presses are big enough for Hydreco's gears, Keystone has been looking forward to

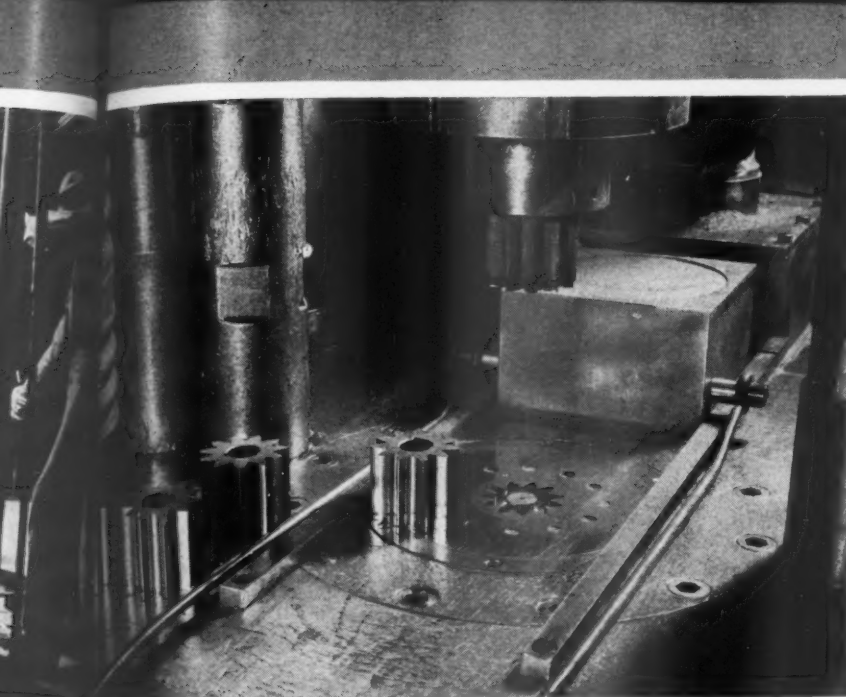
bigger jobs that will need bigger presses.

Baking, or sintering, is another process that seems simple but can get complicated. Because pressed metal must be sintered at around 2,000°F, there is a danger that they will combine harmfully with the surrounding atmosphere, and deform or pick up impurities. To control sintering, Keystone uses an oven where the atmosphere's content is rigidly controlled.

• **Oil Bath**—In the final stage of its process, Keystone uses an oil-cooling treatment. Though metals cooled in water lose their heat quickly and are of high density, they are liable to deform or crack if cooled too fast. To cope with this problem, Keystone designed and installed an oil bath (picture, left), that allows the gears to cool slowly and evenly.

Oil cooling is usually used only for very small parts. Keystone believes that it is the first company to oil cool parts the size of the gears in commercial quantity.

• **Progress**—The development of the gear-making process marks a real step forward for powdered metals. Though industry has been using the powders with considerable success for years (BW—Aug. 21 '54, p90), few people have given much thought to the possibility of pressing powdered metal parts with anything like the strength required by Hydreco. Most of the successful pow-



Keystone presses powder into bulk form, then stamps gears and bakes them.

Part from Powdered Metal

ders to date have been made from low-strength iron.

In spite of this Hydreco began marketing test pumps with powdered metal gears about a year ago, confidently backing them with the same guarantee that goes with all its equipment. In the past year, Hydreco customers bought and used more than 40,000 hydraulic pumps equipped with the gears.

At the end of the year, the company felt that it had proved its point conclusively. And so for the first time, it announced publicly that it was using gears made from powdered metal.

• **Three-Cornered Job**—The development of the gear-making process started back in 1952 when Hydreco decided to try to cut costs of the gears it was using in its hydraulic pumps. For years, the company had bought machined gears, paying prices that mounted as high as 18% of the total cost of the pump. Hydreco began to ask around to see whether the gears could be made from powdered metal instead. The company found it might be possible, but the cost would be prohibitive. One manufacturer offered to press the units for \$40.00 each, or twice the cost of the pump in which they would be installed.

• **Successful Search**—In the course of its search, Hydreco got in touch with Vanadium, which had been experimenting with powdered metals since 1947.

Vanadium seemed to have developed a powdered alloy steel that would fit Hydreco's requirements. Its material was a high-strength steel alloy that, like iron, molded well, and also responded favorably to heat treatment.

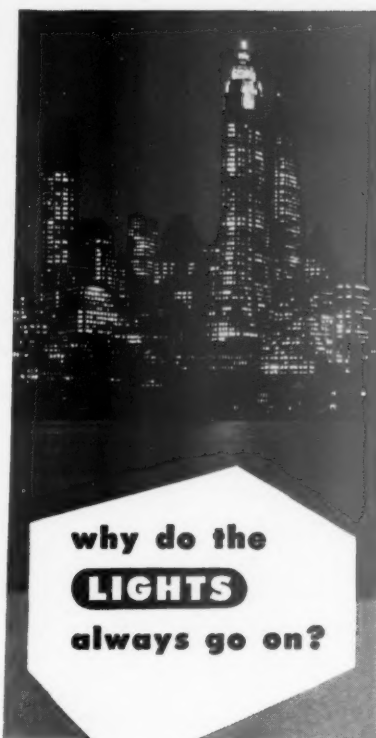
Although Vanadium didn't have the presses Hydreco needed, it put Hydreco in touch with Keystone, which did.

At first, it was a matter of setting up a pilot operation. Keystone had to make special carbide tools for use with its big presses, and had to figure out ways of heat treating the pressed gears so that there would be no harmful combination with elements in the atmosphere. Keystone also had to devise a suitable cooling bath to keep the gears from deforming and breaking.

By March of 1953, they were ready with the first gears, which were shipped to Hydreco for testing.

• **More Problems**—When Hydreco finally decided to use the gears commercially, Keystone was faced with still another problem. The changeover from pilot plant to full-scale production was marked at first by the erratic quality of the finished products. The lack of quality control necessitated scrapping many of the gears, some after they had been baked and could not be reused.

With standardization the goal, Keystone set up a rigid system of testing and inspection, and finally licked the problem of quality control by checking the gears before baking. About a year



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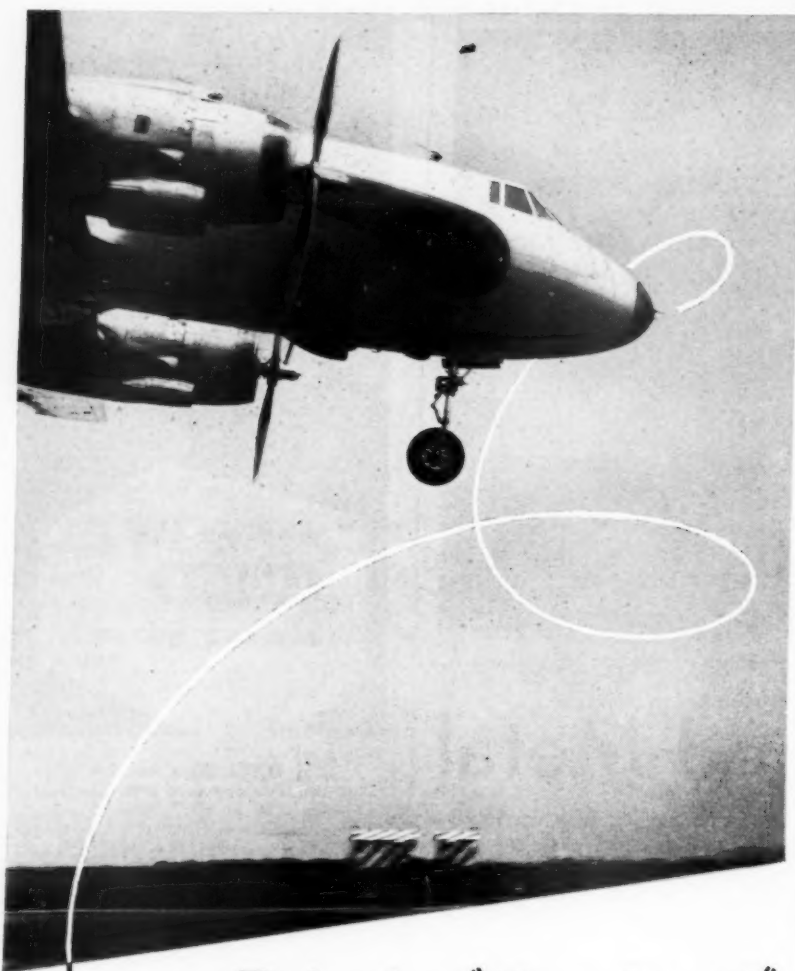


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after the first test units had been delivered, Hydreco received its first large batch of gears from Keystone.

• **Success**—The finished product seems to be a success from everyone's point of view. Vanadium and Keystone have proved the feasibility of the process, and though they are pretty modest in their claims, they obviously hope for other jobs of the same type will grow from the success of this one.

Hydreco, which says it has had no consumer complaints, is announcing that one of its pumps—the most popular of its line—has powdered metal gears, which are guaranteed to equal or surpass the performance of the old machined gears.

Having cut gear costs by 20%, Hydreco has done what it set out to do. But it probably can add to this by savings in inventories and production runs.

Once a press is set to make gears of one outer diameter, it's as easy to make short runs of units with different face widths (thickness) as it is to make one long run of the same face width. This means that Hydreco can keep smaller inventories of the various face widths.

• **Limits**—On the other hand, no one is overrating the significance of the gear's success. One reason for this: Because of the pressures used, the process usually produces metals of a higher strength than is needed by most manufacturers. If lower tensile strengths are required, however, it's still cheaper to use powdered iron.

Another limiting factor is press size. Big parts require big presses, which are both difficult and expensive to build. Keystone figures that the biggest parts it can now handle have a cross section of 10 sq. in. and a maximum thickness of 6 in.

Hydreco itself still has a wait-and-see attitude. It will use powdered parts in only one of its pump models, and will continue to buy cut gears for the rest.

Exit Steam Again

Last week, the Union Pacific's City of Salina puffed into Kansas City's Union Station for the last time behind a steam locomotive. When it left the station it was being hauled by a diesel; the steamer is being retired to mountain duty, where the Union Pacific still uses steam locomotives.

The change-over was the second time that the UP has converted from steam to diesel. Twenty-one years ago, the Salina-Kansas City run was made by one of the first diesel locomotives in the U.S. Since then, the line has reconverted to steam, and now back to diesel again—this time for good, the road says.

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PRODUCTION PATTERN

For Automation: A Broader View

AUTOMATIC controls for a production line don't come in a package that you can buy. And the placement bureau of your favorite university can't provide you with a systems engineer, as the controls specialist is called (page 66).

Of course, you can shark up piecemeal a variety of gauges, computers, valves, tubes, and other standard control components. Technically, these off-the-shelf devices are highly sophisticated. But you'll still be lacking the key part: the turning of the devices into a well-balanced system that can cope with every production problem. To get such a system you have to weigh all the variables: plant layout, the nature of the product, the manufacturing methods to be used. You must know precisely the characteristics of the machinery, the products, and the processes.

This means that the so-called automatic factory is as much a concept of production as a collection of high-class hardware. You have to engineer a whole system, not just the individual steps of the production line. Each stage is related to the ones on either side, though it is not necessarily dependent on them. Thus, auto makers stress automatic handling between machines, as well as automatic machining at each station.

THE SUCCESS of the automatic system depends on the whole design. Unless the over-all planning has been good, the system will surely fail at some points.

It is precisely the lack of engineers able to create such systems that has caused so many companies to sit on the sidelines of automation. Systems engineers as such aren't turned out by the universities; the specialists now in the field were mostly graduated in electrical or electronic engineering. Many of them got into systems work after returning to school for advanced study.

The evolution of the systems engineer as a new sort of broad-gauged specialist began with World War II. The project engineer developing radar for aircraft would discover that he had to know a great deal about airplanes, which became the factor to be controlled or measured. The engineer had to

go to the basic sciences and mathematics, which could provide him with a frame in which to apply what he knew of electrical, electronic, and mechanical engineering. He could spread some of the specialized work among technicians, but he was still responsible for the final, integrated system. He had become a scientist-engineer.

NOWADAYS, the systems engineer starts a project by wrestling with the abstruse questions of what elements in the system need accurate measurement, which ones are important to control. Beyond that, he looks at practical matters of wear and tear on machinery. Finally, he tackles the actual design and fabrication of his system.

Essentially, the concept toward which he is working—the fully automatic control system—is the synchronization of many older controls. The older controls had separate functions; usually each was the responsibility of a technician, working independently. The systems engineer, in linking the controls together, generally eliminates the need for the technicians. The instruments, as he sets them up, operate dynamically with each other, automatically correcting all stages of the operation.

The traditional engineer, moving into systems work, has to slough off his narrow specialization. But the production brass for whom he works have even more to unlearn—they have to give up hidebound manufacturing principles and turn over more authority to the systems engineer. That's because the systems engineer is at his best with the maximum number of variables.

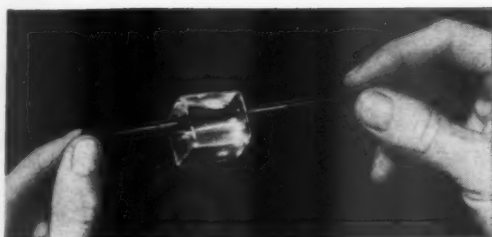
Eying the system as a whole, he might even want to change the design of the product. Or the control devices he uses might suggest the complete redesign of a machine tool.

In all systems engineering, the thinking is still lagging behind the technical possibilities. Automatic control already has the potential to improve the speed, the accuracy, and eventually the cost of production. But the swift running potentials are still waiting for the human imagination to catch up and harness them.

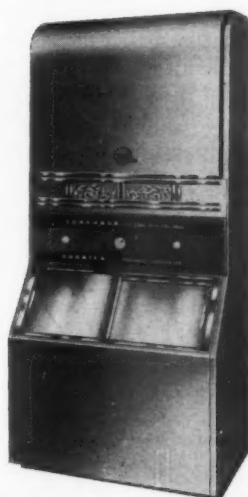
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PRODUCTION BRIEFS

Aluminum foil is a new product line Revere Copper & Brass Inc. has added into the field. Revere bought the assets of Standard Rolling Mills, Inc., a foil producer since 1926. Besides aluminum, Standard's plants can also produce lead foil and tin foil. Revere expects the purchase to add about \$5 million to its annual sales.

Technical problems—109 of them—have the armed forces stumped. They have been compiled in a publication by the Commerce Dept. The list was put together by Commerce's National Inventors Council with the help of the military branches. Among other things the military wants: a substitute for mica, a better oxygen-mask material, a rain deflector for airplane windshields. For a copy of the list, write the Office of Technical Services, Washington 25, D. C.

Radioactive materials for the oil industry are the speciality of a Houston laboratory opened by Tracerlab, Inc., of Boston. On 24-hour notice, the lab can supply isotopes to petroleum drillers, explorers, and refiners—now the biggest industrial users of radioactive. Tracerlab says it will help develop many new uses for short-lived isotopes that formerly couldn't have been delivered fast enough by its other plants.

Piggy-back service on the Pennsylvania RR starts Feb. 1. Two hundred flat cars will carry two trailers apiece between New York City and Chicago, and Philadelphia and Chicago. An independent operator—Rail-Trailer Co. of Chicago—will handle operations between the Pennsy and fleet owners.

The squabble over AD-X-2, controversial battery additive made by Pioneers, Inc., went into another round last week at a two-week FTC hearing in New York City, the first to be held in 25 cities and towns. An FTC examiner rejected a report from the National Academy of Sciences supporting findings of the National Bureau of Standards. FTC wants to know whether Pioneers has used false and misleading advertising.

A \$50,000 grant by General Electric will be used by MIT to help restyle its course of study in electrical engineering. The new program will be designed to turn out engineers combining specialized knowledge with wide general interests and the ability to think creatively. Specially stressed in the new curriculum: control of energy, processing of information, amplification, and modulation.

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Ultrasonics Tones Down

High frequency sound started its industrial life as prima donna. But it hit a few sour notes, and is being scaled down to the role of a good tool.

Curtiss-Wright Corp., the aircraft engine manufacturer, has stepped into the ultrasonics field. Recently, it introduced seven ultrasonic units for use in industry and research laboratories (BW—Jul.24'54,p141).

In many ways, Curtiss-Wright's new venture highlights the ways in which the ultrasonics industry has—and has not—prospered.

It's only over the past five years that industry has seriously considered ultrasonics as a tool. The idea had been kicking around for a long time before that, but it wasn't until its first practical demonstrations (BW—Sep.24'49,p64) that production men began to sit up and take notice. Since then, high frequency sound has been used—with varying degrees of success—to clean small parts, detect flaws in metal, mix solutions, dry paper, process food, and drill everything from tool steel to teeth.

• **Breakdown**—Ultrasonic, or high frequency sound, differs from ordinary sound in that it is inaudible. The vibrations of audible sounds range in frequency from 20 cycles per sec. to about 20,000 cps. Above that, they become inaudible, and are called ultrasonic.

Once you get into this range, there are still other distinctions. Ultrasonics are usually divided into high-power and low-power, and each class can be used for different jobs. The principle involved is this: A singer can sound the same note both soft and loud. Although the frequency of the sound doesn't change, the energy he uses does. Musicians would say that the pitch stayed the same, while the intensity was changing.

This distinction can be made for all kinds of sound, inaudible or audible. In the ultrasonic range, high power or low power means that the same wave lengths can be sent out with greater or less intensity.

If you think of sound waves as tiny rubber balls, you can see why the power behind them is important. Low-power waves will usually bounce around, without breaking anything; but high-powered sound sometimes carries enough force to eat its way through hard materials, or rearrange the internal structure of liquids.

• **Low Power**—The uses of low-power sound are familiar. It can be used to tell direction and distance. Like speech, it's a means of communication. One of its properties is the different way it reflects from different objects. A sound

wave that will travel the length of a 40-ft. steel bar will bounce back to source if it hits a tiny air pocket or crack. Ultrasonic detectors, relying on this echo principle, have been used to test metals, measure the depth, direction, and speed of flow of liquids, and spot submarines.

• **Greater Intensity**—High-power ultrasonics, on the other hand, aren't used to gather information. They are used to move pieces of material around, to break metals apart, and generate heat. The cleaning of small metal parts is one of the most successful applications so far. A solvent bath set to churning around by an ultrasonic generator acts something like a washing machine—bouncing molecules back and forth and knocking off dirt particles.

With this same kind of sound, you can drill tool steels or painlessly dig out tooth cavities.

High-power ultrasonics are being used in the food industry, too. Some experiments have been made in homogenizing salad dressing and aging cheese. And one company has been testing a way to get rid of excess foam in beer bottles before they're capped.

• **Maturity**—All of the instruments announced by Curtiss-Wright are designed to do jobs where ultrasonics have already proven successful. Curtiss-Wright, bowing to the high cost of original research, hasn't tinkered around with its own laboratory projects. Instead, it will power its equipment with ultrasonic generators designed and developed by a West German firm. It's pretty easy to interpret this conservative entry into the field of ultrasonics as a sign of steadiness and care that go along with maturity.

This trend has been apparent for some time. The flow of tricky gadgets that flooded industry a few years ago has slowed to a trickle. Such wonder-working inventions as ultrasonic fog dispersers, smog removers, smoke cleaners, and palpating oil drilling rigs are gradually disappearing. Even stream pollution—hopefully attacked by prophets of ultrasonics—no longer seems a likely field.

The limited size of ultrasonic generators is one reason why some of these projects folded. Most ultrasonic generators today are made of crystals, which expand and contract when an electric current is run through them. It's hard to get much noise from a single crystal, even harder to devise a crystal hookup

that can handle the really big jobs. Even the established process of ultrasonic cleaning can be used only on small parts.

Less whimsical hopes have been dashed, too. Chemists believed that ultrasonics might provide a new and more effective way to speed up chemical reactions. But, while ultrasonic equipment helped some in mixing solutions, it wasn't much good at producing new chemical reactions.

• **Cautious**—Overselling and high research costs are two other troubles that have plagued the industry. In the early days, industrial ultrasonics set off plenty of inspired but uninformed thinking. In fact, it became something of a panacea. Now there's a growing skepticism, as industry takes a look at the costly research and development that goes into producing usable ultrasonic methods and machines.

So far as industry is concerned, however, the possibilities seem pretty well defined: A lot of patient testing lies ahead, though probably not many startling new principles will develop.

In a more dramatic theater, a field to watch is ultrasonic medicine. Along with painless tooth drilling, doctors have found that they can destroy diseased brain areas without hurting healthy tissues, loosen up joints cramped by arthritis, and attack gallstones.

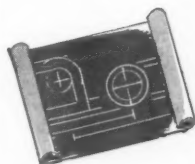


Bubbles in the Plane

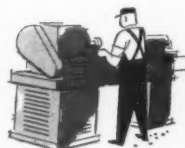
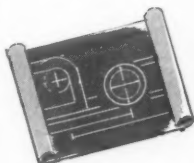
Boeing engineers keep Christmas baubles working all year long—particularly the fragile glass balls that hang on the tree. Boeing uses foam plastic parts that fill space in aircraft, but don't need to be sturdy, and must be light. By dropping the Christmas ornaments into the foam as it is molded, Boeing gets plastic pieces full of big air bubbles. The result: savings in both weight and material.

IN PRODUCT DEVELOPMENT

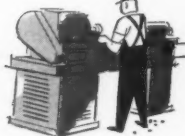
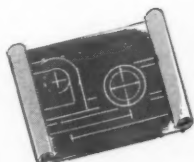
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Some go beyond the blueprint to production planning . . . and stop there.



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Mfg.-Dist. wanted. Nation wide. Royalty-lease basis. Patented automatic tarpaulin cover for open top trucks and trailers. Uncovers and recovers largest trailer in one minute. Easily manufactured at low cost. Have working model. BO-5108, Business Week.

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Do-it-Yourself! New surplus gen. 5,000 watt AC 110v. 1800 rpm 1-BRG. 6" shaft. can be made 2 BRG. Midwest—1270 Augusta, Chi. 22, Ill.

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NEW PRODUCTS

Variable Pulley

A new way to get varying speed outputs from a constant-speed motor is claimed by Equipment Engineering Co. of Minneapolis. The Hi-Lo automatic variable speed pulley is motor driven, and has a continuously adjustable diameter. A belt from the pulley can be used to drive units that need up to 5 hp. The manufacturer says the pulley will keep running at a constant speed despite variations in load.

• How It Works—The pulley is made in two sections that fit into one another by means of a series of projecting cones. The sections are designed to interlock, and can be moved closer together or farther apart, depending on the speed at which you want the belt to drive. The closer the interlocking cones, the faster the belt drives; the farther apart the cones, the slower the belt runs.

The unit comes in seven models, rated from $\frac{1}{2}$ hp. to 5 hp., depending on the size of the driving motor. Maximum speed is about 1,750 rpm.

• Source: Equipment Engineering Co., Dept. KP, 2853 Columbus Ave., Minneapolis, 7, Minn.

Spotting Uranium

Over 30 minerals can make a Geiger counter sing, but there's a simple test that shows prospectors whether or not they have struck uranium. Samples of uranium will give off telltale flashes when spotted with ultraviolet light. Usually, equipment for this ultraviolet testing needs electricity. But Menlo Research Laboratory has constructed a 5-oz. uranium tester that operates on sunlight.

The unit, a spectrum isolation chamber is a small box with two openings. One opening has a filter that admits the ultraviolet part of the sun's light, bars all other kinds of light. The second opening is covered by a magnifying eyepiece. When an ore sample is placed in the box, the prospector can peer through the viewing lens, to see if his sample is giving off the right kind of light.

• Source: Menlo Research Laboratory, Menlo Park, California.

Fire Detector

A new fire spotter and warning system for industry helps detect fires while they are still in the smolder and smoke stage. The Notifier Auxiliary System

uses strategically placed thermostats to reveal any suspicious increase in temperature.

When the thermostat is tripped, it relays a message to a control panel which visually pinpoints the fire's location, gives a general alarm by ringing a bell.

If plant fire-fighting equipment is considered sufficient, the master control can be rigged to give an alarm over the regular municipal system.

• Source: Notifier Mfg. Co., 239 South 11th St., Lincoln, Nebraska.

NEW PRODUCTS BRIEFS

Traffic safety lines dry on before the light can change. Veon, a new thermoplastic compound made by Veon Chemical Corp., Long Island City, N. Y., is said to outlast ordinary painted traffic lines, and can be applied at crosswalks without tying up traffic at all.

FM tuning has been simplified by Zenith Radio Corp., 6001 W. Dickens Ave., Chicago 39. The automatic frequency control circuit that does the job has been incorporated in a new Zenith radio. When the dial comes within channel range the circuit takes over, tunes the station in on the center of the channel.

The first antifreeze booster is claimed by American Resinous Chemicals Corp., of Peabody, Mass. Perma-Save, which will be distributed through Crandall Products Co., 2095 Broadway, New York 23, is said to restore anticorrosive agents in permanent antifreeze to full strength. For 98¢ you get 12 oz., ordinarily enough to do the job.

More do it yourself: This time the project is ambitious, involves installing your own fireplace and chimney. The Uni-Bilt fireplace has the blessings of the underwriters, can be installed against any wall. An outer shell of steel contains the ceramic firebox. The maker, Vega Industries, Inc., Syracuse 5, says that the fireplace and the sectioned chimney can be installed by semiskilled labor in about six hours.

An extra car key made to double as a tie clasp is produced by Maymac Co., 79 West Grand St., Mount Vernon, N. Y. The clips, which cost \$1.98, carry the crest of the owner's automobile.

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Peace, Freedom, and Expansion

Peace, freedom, and expansion are the major themes in Pres. Eisenhower's third annual message on the State of the Union. These objectives have always been stressed by the President and Administration, but they now take on special significance and meaning.

This is apparent from the tone and content of the President's message. He vigorously expressed confidence that we can build an expanding economy, based on free enterprise and world peace. He restated his belief that we can reach the target of a \$500-billion economy within ten years. And he held out hope that our increasing strength would bring lasting peace.

Eisenhower's stress on the future is a measure of how far we have come in the past two years. Certainly, these goals appeared far distant when the President first took office. The Korean War was still raging and threatened to ignite a world-wide conflict. Europe, suffering the ravages of postwar inflation, seemed very vulnerable to the Soviet menace. Here, at home, the incoming Administration was faced with the threat of an inflation of our own and the need to bring about a measure of stability that had long been lacking in our economy.

These were very real and formidable roadblocks. It was essential that they receive top priority, for until we could bring some order to conditions both here and abroad, we could not think of making constructive progress.

Foundations for Growth

A great deal of unspectacular but essential work in clearing these barriers was accomplished. With it done, the President was able a year ago to present a comprehensive program aimed at establishing the foundations for future progress.

A year ago, too, the Administration had to pay special attention to other problems. Although we had a truce in Korea, the international outlook was clouded with uncertainty brought on by the war in Indo-China. And on the home front, our economy was subject to the test of a readjustment that had been long overdue.

The accomplishments of the Administration in dealing with all these problems is reflected in the confident tone of this third message. Internationally, we have made "progress justifying hope for the ultimate rule of freedom and justice in the world." Domestically, said the President, "the transition to a peacetime economy is largely behind us."

In making this appraisal, the President was indicating that the State of the Union was good. Most people share this feeling. True, the peace we have won is still insecure, but it gives us an opportunity to work out a more stable and lasting peace. And though the

economy cannot automatically expand, we have shown in our ability to withstand depression that we have the potential for new expansion.

Major problems, of course, remain. In offering his legislative recommendations, the President was not complacent. His proposals reflected an awareness that there is still much to be done. Most important, any legislation is complicated by the fact that the executive and the legislative are in the hands of different parties.

The President showed that he was not unmindful of the troubles this split may create. He pledged his cooperation and that of his Administration in the task of finding ways and means to promote economic expansion and peace while preserving our fundamental principles of individual enterprise. In doing so, he urged that Congress show the same spirit, not only in its approach to the traditional areas of defense and foreign policy, but also in all other matters affecting the general welfare.

Inseparable Goals

By taking this position, the President was pointing up the inseparable nature of the goals we seek. We must increase our strength in order to preserve peace. But we cannot expand our own economy unless we live in a free world of enduring peace. And peace and expansion will be robbed of their meaning unless the individual maintains his freedom, incentive, and self-respect.

Thus, the recommendations made by the President follow the integrated, middle-of-the-road approach that is characteristic of his entire philosophy. None of his proposals is radical, spectacular, or grandiose. Rather, they show an earnest determination to build on the foundation that has already been established. Indeed, many of his recommendations were submitted a year ago, and failed to gain approval, either through lack of time or differences of opinion in Congress.

We intend to examine many of his specific proposals when later messages fill in the details. Many, of course, will be disappointed that no tax reductions are suggested. We believe, however, that an overwhelming majority of the people will approve his recommendations because they are not proposals that encourage partisan politics, but policies designed to bring us closer to our objectives.

We also believe that the people expect Congress to cooperate with the Administration in taking a constructive attitude on legislation. In observing that both parties are "on trial before the American people," the President was demonstrating the need for responsible government. The Administration is pledged to do its part. Now Congress must demonstrate that it, too, is intent on promoting peace and prosperity.



One design change...4 new sales features

Every manufacturer wants his product recognizably better, hence easier to sell. When you can succeed in this and at the same time realize true manufacturing economy, you're a two-time winner. That's what happened when the brush you see above was redesigned to use Harvey Aluminum Extrusions instead of old-fashioned hardwood strips. Custom designed by Harvey Engineers working closely with the manufacturer's design staff, the extrusions making up the new brush give the power sweeper manufacturer four new sales features. First, a longer-lasting, unbreakable product...second, one easier to maintain...third, (because of

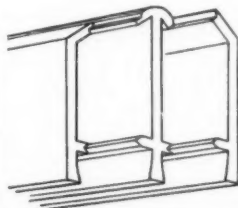
Harvey extrusion's uniformity) brushes always in true balance...fourth, complete interchangeability with the brushes in old model sweepers. And it is an easier brush to make, an important fact in the face of constantly rising costs. Such "special" applications are what we invite at Harvey. For 40 years we have been solving the tough problems with *practical imagination*, backed by the world's most modern, constantly expanding independent aluminum extrusion facility.

A Harvey Field Engineer will be glad to show you how this experience can be put to work to give you a product easier to make, easier to sell.

MAKING THE MOST OF ALUMINUM...FOR EVERYONE

HARVEY

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These three Harvey extrusions are used "as delivered" from the mill...no machining or finishing is required. After cutting to length and drilling, brushes are ready for assembly. We will be glad to send you our newest brochure "Aluminum Extrusions," on this cost and labor-saving material.

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special extrusions, press forgings, bar stock, forging stock, tubes, impact extrusions, aluminum screw machine products and related products.

Another new development using

B. F. Goodrich Chemical raw materials



B. F. Goodrich Chemical Company does not manufacture doors. We supply only the Geon resin for the extrusion.

Folding door hinges on Geon

HERE'S a new type of accordion-fold door which gives you the beauty of true wood paneling with hinge action of flexible, durable extruded strips of Geon polyvinyl. These doors can be made in sizes large enough to give you that "extra" room. They have no floor track and travel quietly on overhead wheels.

The doors come in a choice of custom woods or painted standard finishes and the Geon vinyl strips match or contrast as desired. Lifetime flexibility and trouble-

free operation are Geon's contributions to a good idea.

This folding door idea may spark a new sales development or product improvement for you. Extruded and molded parts made of Geon vinyl are used in many ways—wire and cable insulation, auto and refrigerator gasketing, toys and garden hose. Many more uses are possible and practical. Geon is versatile—it can be made rigid or flexible, clear or colored. For helpful technical information about

Geon, please write Dept. J-1, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



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